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RICHARD P. ROTHWELL, C. E. M. E., Editor.
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The year 1896 has not been altogether a prosperous one in this country from causes which are well understood and have from time to time been fully explained in our columns. Nevertheless the great Mineral Industry has made substantial advances during the year. In spite of low prices for some products the production approaches more closely that of 1895 than had been anticipated, and in many respects an increase has resulted. In the following pages we present a summary of the course of production for the year, and of the exchanges in the principal markets, including comparisons of both with preceding years. As the representative of the industry we most cordially wish all connected with it better times and a prosperous year in 1897.

It needs no argument to convince capital that the best country in which to invest in mining is where the mineral production has grown steadily even under low prices and depressed commercial conditions. North America, and especially the United States, is producing more and more of minerals and metals, and its increase in gold production in the year just closing has been about twice as great as that of all the rest of the world. Capital is not blind or deaf. The next great mining investment boom will have its seat in the United States, in Mexico and in Western Canada, though in this last much caution should be exercised, for there are many "wild cats" there looking for prey.

While every effort has been made to present full reviews of the markets for the past year, we are compelled to omit those of the London lead, spelter and antimony markets, and of the Paris mining stock market, the mails having failed to arrive on their usual time. In this case the Atlantic Ocean is to blame for the delay, and we hope to present the missing letters at an early date.

We have given a good deal of space in the following pages to comments on the mining stock exchanges and to tables showing the course of mining stocks through the year. No presentation of these facts approaching this in completeness is made anywhere else. We believe that many readers will find it of service to them to have the statements on record.

The statistics which we present in the present number are derived in nearly every case from official sources or from the reports of producers, many of whom have most freely and cordially aided us in the work of collecting the figures, and to these we desire to return our thanks. The necessary additions to bring completed reports up to the close of the year have been made, and as long experience enables us to estimate these very closely, we believe that in almost every case the production given will be found to approach within a small fraction the totals which will be made up later from the final reports, and which will be given from time to time in our own columns and in the pages of *The Mineral Industry* for 1896. Those only who are familiar with such work can appreciate the amount of care and labor involved in the preparation of these statistics. We believe, however, that the value of an early presentation of the facts fully warrants us in undertaking the labor required, and we submit the result to our readers, with the full confidence that they will appreciate and approve our efforts.

The lead business in this country in 1896 showed a remarkable degree of activity. The production from domestic ores was large, amounting in all to 175,717 tons, of which 137,478 tons were desilverized lead, 33,803 tons were soft lead, chiefly from the Missouri and Kansas district, and 4,912 tons were hard or antimonial lead. The latter was the only class of the product which showed a decrease, and that was less than 100 tons. In addition to the domestic production there were 79,000 tons imported in all forms, chiefly as base bullion from Mexico and Canada. Adding the stock on January 1st we have a total supply of 273,692 short tons for the year.

The domestic consumption showed a decrease; as estimated it amounted to 206,102 tons, or less by 26,052 tons than in 1895. There was, however, a very large increase in exports, the total reported being 52,590 tons, as against 18,130 tons in 1895. This increase absorbed the surplus portion of the supply, so that the stocks at the close of the year show a slight reduction from those at the opening.

The accompanying table shows the course of the trade during the two years.

LEAD SUPPLY IN 1896.
(Tons of 2,000 pounds.)

Year.	Stock, Jan. '96.	Desilverized.	Soft.	Antimonial.	Total Domestic.	Imported in all Forms	Total Supply.	Export in all Forms.	Consumption	Stock, Dec. 31, '96.
1896..	18,975	137,478	33,803	4,912	175,717	79,000	273,692	52,590	206,102	15,000
1895..	12,634	119,057	32,797	5,000	156,854	100,471	269,959	18,130	232,854	18,975

As by far the greater part of the lead imported came from Mexico

we have included here some statements as to the output in that country. The importance of the lead-producing industry in Mexico has been brought about almost entirely by enterprising American capitalists, who, seeing the facilities offered by the railroads of the country, determined to take advantage of the situation.

It is not so many years ago that, although the advantages of smelting were thoroughly known and appreciated, the trouble was to get rid of the lead from the base bullion. This was wasted, used locally to a very limited extent, but chiefly went back to the furnace as flux for refractory ores short of lead. Exportation of lead from Mexico at this time was never heard of or even dreamt of, but to-day, owing to railroad facilities and the construction of some of the finest smelting works in the world, Mexico appears as a large factor in the world's production of lead. The imports into this country for the past year were not less than 66,000 tons of 2,000 pounds.

The Mexican government figures show no increase in exports over the above, and as we have found so far to be the fact, all Mexican exports of base bullion are sent to this country for refining. To the amount exported may be added possibly 5% for home consumption, just as all tin produced in Mexico is readily purchased, with the result that the production of lead in Mexico for the past year will amount to about 69,000 tons of 2,000 lbs.

United States Mineral and Metal Production in 1896.

The production of minerals and metals in the United States for the year 1896 is given at a total value of $653,311,468, showing a decrease, as compared with 1895 of $24,689,266, or about 3½ per cent. This decrease was largely in values rather than in quantities; in none of the chief articles was there any marked decrease, while in several there were considerable increases.

The total production of metals in the year 1896 was valued at $242,311,481, an increase of $1,694,111 over the previous year; while the value of non-metallic substances was $410,999,987, a decrease of $26,383,377 from 1895. A large part of this was due to the lower values of coal, stone and a few other important substances, very little resulting from the smaller quantities.

The production in detail will be found in the table on the opposite page, and some particulars as to the different substances are given below. We venture to say that no table approaching the completeness or correctness of this has ever before been published at so early a date.

The collection and publication on the last day of the year of full and substantially accurate statistics of the mineral production of a continent, is a gigantic undertaking never before attempted by anyone. The *Engineering and Mining Journal* has accomplished it, and confess to a feeling of some exultation at the feat.

METALS.

Aluminum.—The production of this metal shows an increase of 400,000 pounds over that of 1895, the total for the year being 1,300,000 pounds. The production continues in the hands of a single company, the Pittsburg Reduction Company.

Antimony.—An increase of about 100 tons is reported in the production, which came wholly from the California mines.

Copper.—The increase in copper has been extraordinary, the total gain amounting to 67,370,150 pounds. This gain was made in spite of a large decrease in the domestic demand, but was more than absorbed by the extraordinary exports for the year, which are the largest on record. The course of copper production is shown more fully on another page.

Gold.—The production of the United States in 1896 reached the great total of $57,000,000, a gain over 1895 of no less than $10,169,800. This extraordinary advance, which far surpasses the gain reported from any other country in the world, puts the United States far in the lead of the producing countries. Our output of gold was no less than 26 per cent. of the total reported for the entire world.

Iron.—The production of pig iron in the United States has been, in 1896, 8,768,869 long tons. The depression in business which made itself manifest in the latter part of the year had less effect than might have been anticipated, the decrease from 1895 being only 677,439 tons, or about 7%. Fuller particulars of the iron production will be found on another page.

Lead.—The production of lead from domestic ores in 1896 amounted to 175,717 short tons, showing an increase of 20,863 tons over the preceding year. In addition to this there were 79,000 tons produced from imported ores, or refined from imported bullion.

Platinum.—The production of platinum, obtained chiefly by parting from gold at the San Francisco Assay Office, shows no material change.

Quicksilver.—The output for 1896 was 33,012 flasks (of 76½ pounds each), showing a decrease of 966 flasks from the previous year. The production continues to come wholly from the California mines, no new deposits having been developed to the producing point during the year.

Silver.—The production of silver from domestic ores reached a total of 45,465,173 fine ounces, showing a decrease from that of 1895 amounting to 865,062 ounces only. The silver production has thus been maintained better than has been anticipated. Moreover, there were produced or refined from foreign ores and bullion by our smelters and other works no less than 40,000,000 fine ounces of silver, making the total quantity refined or put into final marketable form in this country 85,465,173 fine ounces. This large production was almost entirely absorbed by the markets, and the average price of silver for the year shows an actual advance, having been 67 cents, although toward the close of the year it fell about 2 cents below that point. Of the silver obtained from foreign ores it is estimated that 38,000,000 ounces came from Mexican ores and bullion and 2 000,000 ounces from materials brought into this country from Canada, chiefly from British Columbia.

Zinc.—The total production of spelter or commercial zinc for 1896 amounted to 77,084 short tons, showing a decrease of 4,774 tons from that of 1895. The production was fully up to the demand, however, and there was to some extent a falling off in prices, as shown elsewhere. Of the output of spelter in 1896, 31,431 tons came from the Illinois and Indiana districts, 36,331 tons from the Kansas-Missouri region, and 9,322 tons from the Eastern and Southern producers. The latter as well as the Illinois District showed a decrease, a slight gain being reported from the Kansas-Missouri region.

NON-METALLIC PRODUCTS.

Abrasives.—The production of these materials, including corundum, garnet, tripoli and infusorial earth, and in addition millstones and whetstones, shows but little change. Carborundum is making its way in various quarters and the manufacturers of this artificial abrasive are arranging for a large increase in the production.

Alum.—The production remains about stationary, any tendency to increase being checked by the absence of demand among the manufacturers who ordinarily consume this product.

Asbestos and Talc.—There was a slight increase in the production of asbestos: that of fibrous talc remained about the same, no new producers having come into the market. The same thing may be said of the lower grade of talc and of soapstone.

Asphalt and Bituminous Rock.—A change has been made in our table this year, asphalt, asphaltic limestone, bituminous rock and bituminous sandstone being reported separately as being products of distinct grade and different uses, whereas in most returns they are given together under a single head. The production, upon the whole, shows little change, the tendency being to increase rather than to diminish.

Barytes.—A slight decrease is reported in this product, which is of comparatively slight commercial importance.

Bauxite.—The production of bauxite, which came entirely from the Georgia mines, is referred to more fully elsewhere. The greater part of this mineral continues to be used in the manufacture of aluminum. The Pittsburg Reduction Company now controls some of the principal bauxite beds and is preparing to work them on a larger scale.

Borax.—The output, most of which now comes from the mines in Southern California, shows a gain. It is still in the hands of a single producer, the Pacific Coast Borax Company, which in 1896 consolidated with the Redwood Chemical Works of Great Britain. The consolidated company practically controls the borax output of the world.

Bromine.—An increase of 156,000 pounds, or nearly 40%, is reported in this product, the total amount still being somewhat limited.

Cement.—The cement producers reported in 1896 a decrease of 966,000 barrels, or about 13%, in the production of natural hydraulic cement. This was nearly made up, however, by an increase of 935,000 barrels in Portland cement. This would indicate a production of about the same quantity as in 1895, but an increased demand for the manufactured or Portland cement.

Clays.—The clay industry generally remains almost stationary. There was no appreciable decrease, but an absence of the gain which might have been expected.

Coal and Coke.—As was inevitable in a year of business depression the increase in coal was not large, in fact, it is surprising that bituminous coal should have shown any gain at all. The output in 1896 was 141,770,099 tons, showing a gain over 1895 of 4,371,752 tons. On the other hand, there was a decrease of 6,782,057 short tons in the anthracite production, this amount being greater than the gain in bituminous. The total coal production was therefore 193,351,027 short tons, and the total decrease as compared with 1895 was 2,410,305 tons. With ordinary prosperity and activity in manufacturing we would doubtless have passed 200,000,000 tons before this, and it is to be hoped that that point will be reached in 1897. The production of coke showed a gain of 445,276 tons, chiefly due to the activity of the iron and steel trades in the earlier part of the year. The price of coal continues very low, the average for bituminous coal at mines being below $1 per ton.

Cobalt Oxide.—The producers report about the same output as in 1895.

Copperas.—The production shows a slight decrease, as was to have been expected; the difference amounted to about 3,000 short tons.

Chrome Ore.—The output which comes entirely from the California mines was only about one-fourth of that reported in 1895. Our principal

supplies of chrome ore for Eastern manufacturers continue to come from abroad.

Feldspar.—This mineral shows a decrease in production of 2,262 tons as compared with 1895. The production fluctuates from year to year usually, the demand not differing greatly.

Graphite.—An increase of 58,000 tons is reported in this mineral. A further gain may be expected in 1897 from the very promising deposit recently opened in Rhode Island.

partly due to a decreased demand from the steel trade, but chiefly to the continued large imports of foreign ores from Russia, Cuba and Central America, which can be delivered by water at Eastern ports.

Mica.—The production of mica remains about the same, a slight increase being shown in that marketed as ground mica and a decrease in the sheet mica.

Mineral Wool.—An increase is reported in this product for which new markets are being opened.

UNITED STATES MINERAL AND METAL PRODUCTION IN 1896.

No.	Products.	Customary Measures.	1895. Quantity. Customary Measures.	1895. Quantity. Metric Tons.	1895. Value at Place of Production. Totals.	1895. Value at Place of Production. Per M. Ton.	1896. Quantity. Customary Measures.	1896. Quantity. Metric Tons.	1896. Value at Place of Production. Totals.	1896. Value at Place of Production. Per M. Ton.
	NON-METALLIC.									
	Abrasives:									
1	Corundum & emery	Sh. T.	385	349	$56,400	$161.60	372	361	$55,189	.....
2	Garnet	Sh. T.	2,065	1,873	93,350	50.00	2,365	2,135	97,350	.....
3	Grindstones	Sh. T.	36,389	33,004	290,378	8.49	31,865	30,942	282,598	.....
4	Millstones	Sh. T.	.....	.....	8,525	.....	.....	.....	13,452	.....
5	Tripoli & inf. earth.	Sh. T.	1,788	1,622	26,049	16.00	2,012	1,955	26,207	.....
6	Whetstones	Sh. T.	1,609	1,459	78,303	53 67	610	553	29,309	.....
7	Alum	Sh. T.	75,000	68,025	2,225,000	32.70	75,000	72,900	2,225,000	.....
8	Antimony ore	Sh. T.	1,083	982	37,905	38.60	150	145	4,750	.....
	Asbestos and talc:									
9	Asbestos	Sh. T.	1,010	916	11,400	11.35	716	696	12,670	.....
10	Fibrous talc	Sh. T.	66,500	60,316	665,000	11.03	50,000	45,360	500,000	.....
11	Talc and soapstone	Sh. T.	18,885	17,129	361,353	21.00	7,219	6,900	64,595	.....
12	Asphalt	Sh. T.	14,300	12,970	300,000	23.13	4,500	4,374	90,000	.....
13	Asphaltic limestone	Sh. T.	.....	.....	.....	.....	700	680	3,500	.....
14	Bituminous rock	Sh. T.	43,778	39,707	143,456	3.61	.....	.....	.....	.....
15	Bit. sandstone	Sh. T.	.....	.....	.....	.....	17,000	15,422	68,000	.....
16	Barytes	Sh. T.	20,255	18,371	99,020	5.39	18,000	16,329	86,543	.....
17	Bauxite	L. T.	14,145	14,371	56,580	4.00	15,000	15,240	.....	.....
18	Borax	Lbs.	13,506,356	6,126	742,850	121.09	15,181,890	.....	759,094	.....
19	Bromine	Lbs.	394,854	179	102,662	573.53	550,285	.....	143,074	.....
20	Cement, nat. hydraul.	Bbls[a]	7,694,053	1,047,006	4,597,285	4 30	6,728,103	.....	3,629,666	.....
21	Cement, Portland	Bbls[b]	749,059	185,879	1,430,089	10.53	1,684,261	.....	1,790,772	.....
22	Clay, refractory	Sh. T.	3,750,000	3,401,250	4,500,000	1.35	3,750,000	3,401,250	4,500,000	.....
23	Clay, kaolin	Sh. T.	30,910	28,035	258,431	9.22	29,056	28,242	219,732	.....
24	Coal, anthracite	Sh. T.	58,362,985	52,965,538	89,948,699	1.69	51,580,928	46,794,218	79,434,629	.....
25	Coal, bituminous	Sh. T.	h137,398,347	126,627,141	125,344,248	1.00	141,720,099	128,568,474	127,548,089	.....
26	Coke	Sh. T.	9,927,348	9,006,090	15,258,935	1.69	10,372,624	9,410,044	15,973,840	.....
27	Cobalt oxide	Lbs.	6,400	3	8,640	2880.00	12,825	6	16,672	.....
28	Copperas	Sh. T.	14,118	12,805	69,846	5.46	11,108	10,796	53,112	.....
29	Copper sulphate	Lbs.	45,000,000	20,412	1,350,000	66.13	45,000,000	20,412	1,350,000	.....
30	Chrome ore	L. T.	1,450	1,473	16,795	11.39	328	293	3,670	.....
31	Feldspar	L. T.	22,195	22,550	104,082	4.67	19,923	20,241	103,599	.....
32	Fluorspar	Sh. T.	4,000	3,628	36,440	10.04	.....	.....	.....	.....
33	Graphite	Lbs.	392,008	178	17,640	9.95	450,000	.....	20,250	.....
34	Graphite, amorphous	Sh. T.	1,100	998	4,700	3.00	574	557	3,850	.....
35	Gypsum	Sh. T.	298,572	270,804	974,219	3.60	248,869	211,900	867,071	.....
36	Iron ore	L. T.	16,950,000	17,221,200	29,662,500	1.72	17,000,000	70,272,000	32,300,000	.....
37	Lime	Bbls[c]	i60,000,000	5,443,164	30,000,000	5.50	.....	5,443,164	30,000,000	.....
38	Magnesite	Sh. T.	2,200	1,995	14,700	7 39	2,067	2,592	13,435	.....
39	Manganese ore	L. T.	14,883	15,121	92,044	6 92	7,303	7,419	69,585	.....
40	Mica, ground	Lbs.	750,000	340	31,956	94.00	772,003	.....	33,332	.....
41	Mica, sheet	Lbs.	6,200	3	6,400	2133.00	3,000	.....	3,150	.....
42	Mineral wool	Sh. T.	6,742	6,115	69,481	11.36	7,659	7,444	82,814	.....
43	Monazite	Lbs.	1,900,000	862	114,000	132.40	.....	.....	.....	.....
44	Natural gas	.....	.....	.....	12,000,000	.....	.....	.....	10,000,000	.....
45	Paints, mineral	Sh. T.	47,084	42,705	1,086,767	25.40	75,219	73,112	1,070,556	.....
46	Paints, vermilion	Sh. T.	118	107	118,190	1105.00	96	93	94,677	.....
47	Paints, white lead	Sh. T.	95,389	86,537	9,061,965	104.00	89,313	87,088	7,378,332	.....
48	Paints, zinc oxide	Sh. T.	22,690	20,498	1,588,300	77.43	16,799	15,239	1,595,905	.....
49	Petroleum (crude)	Bbls[d]	50,652,025	6,420,742	42,547,701	6.60	46,795,760	5,731,920	42,116,184	.....
50	Phosphate rock	L. T.	831,498	844,802	2,577,643	3.00	312,718	317,721	1,049,655	.....
51	Marls	L. T.	217,700	221,183	587,790	2.67	155,000	157,480	418,500	.....
52	Precious stones	.....	.....	.....	250,000	.....	.....	.....	200,000	.....
53	Pyrites	L. T.	81,000	82,296	353,160	4.29	73,822	75,003	186,698	.....
54	Salt, evaporated	Bbls[e]	12,521,498	1,589,178	5,844,348	3.78	10,958,751	1,391,349	5,432,105	.....
55	Salt, rock	Bbls[e]	1,367,638	173,662	518,740	2.99	1,157,000	146,998	138,840	.....
56	Silica, sand & quartz	L. T.	523,640	532,018	553,128	1.04	634,355	644,504	992,676	.....
57	Slate, roofing	Sq'es.	645,361	190,277	2,062,239	10.82	537,063	179,021	1,726,790	.....
58	Slate, manufactures	Sq. ft.	3,786,599	11,170	369,062	33.00	2,267,424	7,558	285,803	.....
59	Soda, natural	Sh. T.	1,900	1,724	47,500	27.56	.....	.....	.....	.....
60	Soda, manufactured	M. T.	.....	167,000	3,841,000	23.00	.....	.....	3,500,000	.....
61	Stone, limestone (flux)	Sh. T.	3,390,000	3,444,240	2,542,509	.74	.....	.....	2,500,000	.....
62	Stone, marble	Cu. ft	6,942,533	568,593	4,086,261	7.18	6,116,847	.....	2,729,727	.....
63	Stone, onyx	Cu. ft	800	66	10,750	163.00	500	.....	5,000	.....
64	Other building stones	.....	.....	.....	33,000,000	.....	.....	.....	30,000,000	.....
65	Sulphur	L. T.	1,650	1,676	126,950	15.75	1,500	.....	100,000	.....
66	Est. prod. unspecified	.....	.....	.....	5,000,000	.....	.....	.....	5,000,000	.....
	Total non-metals	.....	.....	.....	437,383,364	.....	.....	.....	410,999,987	.....
	METALS.									
67	Aluminum	Lbs.	900,000	408	495,000	1213.23	1,300,000	.....	520,000	.....
68	Antimony	Sh. T.	433	393	68,847	175.28	596	579	83,440	.....
69	Copper	Lbs.	386,453,850	175,294	36,944,988	210.76	453,824,000	.....	48,786,080	.....
70	Gold	Ozs. [f]	2,265,612	j70,470	46,830,200	j664.60	2,757,620	85,773	57,000,000	.....
71	Iron, pig	L. T.	9,446,308	9,597,449	108,632,542	10.77	8,768,869	8,909,000	87,688,690	.....
72	Lead, value at N. Y.	Sh. T.	156,854	142,298	10,132,768	71.20	175,717	159,410	10,472,733	.....
73	Platinum	Ozs. [f]	150	.....	2,250	.....	150	.....	2,250	.....
74	Quicksilver	Flks[g]	33,978	1,179	1,313,589	1114.00	33,012	.....	1,222,444	.....
75	Silver, comm'l value	Ozs. [f]	46,331,235	j1,441,087	30,254,296	20.99	45,465,173	1,414,148	30,461,665	.....
76	Zinc (spelter)	Sh. T.	81,858	74,245	5,942,890	80.04	77,084	74,925	6,074,219	.....
	Total metals	.....	.....	.....	240,617,370	.....	.....	.....	242,311,481	.....
	Grand totals	.....	.....	.....	678,000,734	.....	.....	.....	653,311,468	.....

(*a*) Barrels of 300 lbs.; (*b*) 400 lbs.; (*c*) 200 lbs.; (*d*) 42 gals.; (*e*) 280 lbs. (*f*) Troy ounces. (*g*) Flasks of 76½ lbs. (*h*) Bituminous coal includes brown coal and lignite. The anthracite production is the total for Pennsylvania, Arkansas, and Colorado. (*i*) Estimated. (*j*) Kilograms.

Abbreviations: Sh. T., short tons (2000 lbs.); L. T., long tons (2240 lbs.); M. T., metric tons (2204.6 lbs.); Sq'es, squares (100 sq. ft., lapped and laid)

Gypsum.—A decrease of about 50,000 short tons is shown in the output of gypsum. This was chiefly in the gypsum used for agricultural purposes, although there was also a falling off in that made into plaster.

Iron Ore.—The production was about the same as in 1895, although that of pig iron was somewhat less; the stocks remaining on hand at the close of the year were much larger.

Magnesite.—But little change is shown in the output of this mineral, which continues to come almost entirely from the California mines. Most of the product is also used on the Pacific Coast.

Manganese Ore.—The production from the Georgia mines was very small; there was a decrease in the Virginia mines also and the output in the United States was only about half the amount of 1895. This was

Monazite.—There was but little change in the supply, which continues to come from the North Carolina placer washings.

Natural Gas.—The value of the gas produced and sold shows some decrease, principally due to the exhaustion of wells in the Western Pennsylvania and Indiana gas belts. New sources of supply are being discovered, however, which may replace the exhausted wells.

Mineral Paints.—A gain of about 60 per cent. is shown in mineral paints, chiefly the iron oxide paints. White lead and zinc oxide, which form an important item, are referred to elsewhere.

Phosphates and Marls.—A heavy decrease in the production of phosphate rock is shown, due to the closing down of many of the South Carolina and Florida producers on account of low prices and

light demand for export. The new phosphate fields in Tennessee promise well, but their production has not yet reached an important amount. Marls decreased vary considerably from year to year, and last year showed a diminution.

Precious Stones.—No change can be reported in our small production of these stones.

Pyrites.—The production did not increase last year. The Virginia mines especially are making preparations to increase their output and they are favored by the high prices of brimstone which may increase the demand for pyrites.

Salt.—The production of salt remained nearly unchanged. There is, of course, but slight alteration in the demand for domestic uses. The product absorbed in the chemical industry is gradually increasing.

Soda.—The output of soda is growing with the extension of the chemical industry, which is steadily going on in this country. The production of natural soda from Wyoming remains small owing to the difficulty of access to the deposits.

Stone and Slate.—In a year when construction has been limited by a depression of business and financial disturbances, building materials such as these can hardly be expected to show an increase in demand. The falling off was comparatively slight, however, and the producers experienced more trouble from small prices than the lack of sales.

Sulphur.—The production of sulphur in the United States is still a limited one in spite of the opportunity offered by the recent rise in prices and the demands of the Sicilian sulphur trust. Arrangements are being made to develop some of the Texas deposits, however, which we hope will be successful within a short time.

ANTIMONY IN 1896.

The production of antimony in the United States did not increase during 1896. The total reported output of ore was 150 tons, valued at $4,750. This came from the California mines, no work apparently having been done in the Nevada or Idaho mines, which have been closed down during the year. The production of antimony regulus in marketable form amounted to 596 tons valued at $83,440.

THE NEW YORK ANTIMONY MARKET IN 1896.

The production of antimony in the United States during 1896 was 596 short tons, which is again an increase over last year. A large part of the antimony refined came from foreign ores.

Market.—Almost throughout the year the market had a dull and declining tendency, and sales were very difficult to effect. We have mentioned already in our last year's report that the old English standard brands have more or less lost their hold on the consumers, mainly on account of the very stiff prices often asked for them and the great and increasing competition made by new brands, which were also found to be of good quality, so that the cheaper prices at which they were offered induced a great many of the consumers to go over to them. This has been, to a less degree, the case with Italian and Hungarian antimony, but much more marked with Japanese, which has been found of excellent quality, and which, in larger and larger quantities, has regularly been imported, and commands now a ready sale to the detriment of the English brands. It does not appear that consumption has materially changed, and we are probably not wrong in saying that it is not much larger than last year's.

At the opening of the year Cookson's antimony was held at 7⅞c., United States French Star at 7¼c. and Hallett's at 6⅞c., but from month to month prices sagged off slowly, and by the end of June the finer grades especially had suffered on account of the competition of the Japanese, as well as of the United States antimony, which was greatly pushed for sale, and the prices then stood Cookson's 7¼c., United States French Star 6⅞c., and Hallett's 6⅝c.

During the depression of business in the summer months a further decline took place, which culminated at the end of October, at which time the following rates had been established: Cookson's 6⅝c., United States French Star 6½c., Hallett's 6¼c. Then a somewhat better consumptive demand sprang up after the election had been decided, and the strenuous resistance made by the producers to further work at these figures, which evidently had proved very unremunerative, resulted in a slight improvement, which was carried through, and at the end of the year the prices ruling are as follows: Cookson's 7c. to 7¼c., United States French Star 6⅞c. to 7c., Hallett's 6⅝c. to 6¾c.

COPPER PRODUCTION IN 1896.

The production of copper in the United States in 1896 showed a large increase, although the consumption decreased on account of the general depression of business and the light demand from the electrical and other interests. The total output, as given in *The Mineral Industry* for 1895, was 386,453,850 lbs., or 172,524 long tons. For 1896, estimating the month of December, we have a production of 453,913,600 lbs., or 202,640 long tons, showing an approximate gain last year of 67,459,750 lbs., or 17·5%. The production in 1896 was by far the largest ever reported. The increase came largely from the Montana mines, which have made a very large output, the Anaconda alone turning out over 115,000,000 lbs. The Michigan mines maintained about their usual output.

The following table shows the production of copper in the United States, and by the leading foreign mines, and the exports of copper from the United States. The figures (December being estimated) are those reported by the producing companies to Mr. John Stanton, of New York, who acts as their statistician. The amounts are in long tons of 2,240 lbs.:

	1894.	1895.	1896.
Production, United States mines	159,623	171,067	202 640
Exports from United States	76,297	64,000	124,659
Approximate consumption, United States	83,326	107,067	77,981
Production, leading foreign mines	88,531	86,178	85,819

The difference between production and exports may be taken approximately as the United States consumption, since there was but little difference in the stocks. The production in 1896, therefore, shows a gain of 17·5% as compared with 1895, and of 26·8%, as compared with 1894; but the approximate consumption declined 27·2% from that of 1895, and 6·4% from that of 1894. The difference last year was made up by the very large exports, which were greater by 94·4% than those of the preceding year, and more than double those of 1894. The reporting foreign mines show but little change from year to year; but the extraordinary demand in Europe, which was so marked a feature at the year, absrbed our entire surplus.

THE NEW YORK COPPER MARKET IN 1896.

The business community will not be sorry that the year 1896 has finally come to an end. It could hardly be foreseen that the year would bring with it so many vicissitudes and such vast uncertainty, which again brought us on the verge of a panic almost as serious as the one of 1893, the consequences of which are still more or less felt.

Early in the year, it was not unreasonable to expect a continuance of the expansion in industry and commerce, which characterized the year of 1895, and which was dampened toward the end of that year only through more or less extraordinary circumstances, except perhaps that the uncertainty of the coming political struggle had to be taken into consideration. However, it became apparent only too soon that same would have a greater influence on trade and commerce than has been the case for the past three decades. Early in the spring the political battle commenced in earnest, and the fight soon shaped itself—not as was anticipated into a struggle between protection and free trade—but into a wrangle over the financial question, and this took a decisive shape after the conventions of Chicago and St. Louis. The radical action taken by the Democratic and Populist parties in their respective conventions could not fail to have an adverse influence on trade in general, and as soon as Europeans understood the magnitude of the question at issue, they tried to reduce as much as possible their holdings and interests in this country. This was at first apparent from the enormous sales of bonds and stocks for European account, the prices of some of which, in consequence thereof, reached almost the lowest level of 1893, and a great many others fell far below. Besides, credits were curtailed, and the money demanded back by European financiers. This led to enormous shipments of gold during the months of July and August, which was stopped after the Eastern banks came to the rescue of the Treasury by agreeing, by mutual consent, to stem the tide of the outflowing yellow metal. Very soon thereafter the movement of grain to Europe commenced in an unprecedented fashion, and in a comparatively short time this turned the balance of trade in favor of the United States. The elections meantime drew nearer and nearer, and the battle waged fierce and hot during the two months preceding the contest, the result of which was more anxiously awaited than perhaps that of any previous one. The victory of the Sound Money party at last restored the confidence so very much needed, which was anxiously looked for for a period of more than three years. Some parties may have been too sanguine as to the immediate outcome, expecting at once an improvement in business and industrial circles throughout the United States, but to a certain degree they found themselves mistaken, and after the first excitement was over a more sober and conservative policy was observable, which, in the opinion of experienced business men, is far preferable to a quick and erratic upward movement, which could only end disastrously.

If therefore the hopes of the many have not been immediately realized, we enter the New Year with brighter prospects than for a great many years past, and the more slowly the improvement comes, the more chance there is of its being permanent.

During all this turmoil copper stood the test better than could have been expected, and this is mainly to be attributed to the great prosperity to be recorded of the main industries of Europe. The reports received from there throughout the year can practically be compared with the most prosperous times which the United States experienced during the seventies and eighties, and while we were hampered here right and left, pending the political and financial issues, Europe could hardly find hands and machinery and workshops enough to execute the orders on the books. Never in the history of the world have European shipbuilders been so busy as during the past year; never before was there observable such an expansion in trade in the direction of the transmission of electric power, and never before since the introduction of the electric light, telephone, etc., was the demand for copper wire larger than during that period. This was the more fortunate for the copper industry, as not only did consumption in the United States during the year show a continual falling off, which, towards the fall, resembled almost an utter stagnation, but on the other hand there was such an enormous increase in the production from the beginning of the year that the total output of copper in the United States amounts to more than 15% above the very large total of 1895. Were it, not, therefore, for the unprecedented demand for copper from Europe, it is difficult to realize how far the otherwise unavoidable depression in prices would have gone. As it was, copper not only showed an astonishing stability, but almost throughout the year ruled at such high figures as will bring the average up to about that of 1892 and 1893, and far above that of 1894. For the last four months shipments were so large, and in consequence of a great movement in grain steamer room so scarce, that exporters had the greatest difficulty in securing freight room, although freights had gone up from 100 to 200%, and in several instances even more. The total exports for the year 1896 amount to 124,659 tons of 2,240 lbs. against 64,000 tons in 1895, or an increase of 64,659 tons.

In the meantime, home manufacturers who were very cautious, kept their stocks as low as possible, and most of them were able to work only half time or not much more, and though they may have to chronicle a rather bad business for themselves, they were certainly not exposed to such fluctuations in the cost of raw material as to inflict heavy losses on them in this direction.

Consumption of sulphate of copper again shows a very large increase, and though production has, at least to a certain extent, been enlarged, there is already such a very large demand for shipment over the first six

months of 1897 that the stocks which usually accumulate before winter are sure to be exhausted before February. Consumption in this direction is becoming more important from year to year.

The larger production already mentioned is about equally divided among the main producers. The Anaconda continues to stand at the head of the list, and will average above 10,000.000 lbs. of fine copper monthly. Boston & Montana has held its own, while the sister company, Butte & Boston, was forced into bankruptcy on account of some of the mines not having developed as well as was anticipated. It has transpired that a large block of shares tied up in the Davis estate has been purchased by other stockholders who have the control, and who have levied an assessment on the stock and cut down the interest charges on the bonds, so that it may be assumed this company will, ere long, again rank as a large producer. The other two leading companies in Montana show a slight improvement.

In Arizona the main increase belongs to the United Verde Company, which is now producing over 2,000,000 lbs. of fine copper monthly, and is likely to still further increase its output during 1897. The Copper Queen has kept its production very close to that of the United Verde, while the output of the other three Arizona companies has been somewhat irregular, and they do not show much alteration as compared with the previous year.

On Lake Superior it is the Calumet & Hecla which shows the material increase, and this company may be set down as producing 7,000,000 to 8,000,000 lbs. of fine copper monthly. The Quincy, under the admirable management of the aged, but ever young, president, has again shown excellent results, and it has been able to divide a $20 dividend on the value of 50,000 shares of nominally $25. The Tamarack Company encountered a great many difficulties, which appear now to be pretty well overcome, and it has held its own so far as the producing capacity is concerned. Of the smaller Lake Superior mines the Wolverine is vigorously pulling to the front. The production from the outside sources does not show any great change.

It is not expected that the Old World will show any material increase in production, but it must not be assumed that this could not easily be done if desired; and some of the larger producers are in excellent position to materially increase their output at comparatively short notice. For instance, at a recent meeting of the Rio Tinto Company, the chairman mentioned that "There are within sight or striking distance 133,000,000 tons of ore, sufficient, at the highest rate of output for any past year, to supply sulphur and copper to meet the company's requirements for the next 70 years, and this is independent of the remaining unexplored portion of the company's property. The company is in a position to turn out steadily at least 30,000 tons of refined copper per annum."

As already pointed out, prices for copper have ruled fairly high, and the fluctuations may be figured at 1⅛ to 1¼c. at the outside. Late in December, 1895, the Calumet Company had made a large sale to manufacturers extending over several months, at 10c., but early in January, under the general depression contingent upon the President's Venezuela message, this price was shaded, and by the end of that month prices had sagged off to 9¾c., while a large business had been doing in electrolytic copper at 9½c. These low prices brought large orders, not only from home consumers, but principally from abroad, and in February prices were marked up to 10½c. for Lake, and close to this figure was obtainable for the prime brands of electrolytic copper. Orders from consumers were coming in to such a large extent and the demand, especially for wirebars, was so large that prices quickly advanced to 11c., at which figure the Calumet & Hecla Company sold the bulk of its output for several months ahead, and later on this proved an exceedingly good sale.

Manufacturers being now well covered, had no need for additional copper, which was held at even higher prices by producers. Then a period of comparative quietude set in, which lasted pretty well until May, in which month the business revival was quite general, and particularly so as far as copper is concerned. Some transactions took place, Lake copper being paid for at prices ranging up to 11½c., but for electrolytic copper proportionate prices could not be obtained, and the margin between the two grades—the quality of which is almost equal—became wider. The highest prices obtainable for electrolytic copper did not go above 11⅛@11¼c., while all along casting copper remained within ¼c. of the quotation for electrolytic.

In the month of June, market values did not change much, but one transaction of the greatest magnitude took place, and that was a sale of Anaconda stock for account of the Hearst estate to the Exploration Company of London, which was followed in October by a further important sale, and through which about one-half of the company's stock was transferred to European capitalists. It is well known that this company, under the able management of Mr. J. B. Haggin has, during the last few years become a good-paying one, and while so far it is not exactly known to outsiders where the controlling interest is, there is little doubt but that if it is not already with European holders, it will be before very long. This is of the greatest interest to the trade, as it is well known that the Exploration Company of London, either directly or through their main shareholders, is in close touch with the main producers of copper in Europe.

Average Monthly Prices of Lake Copper

In New York, for the years 1896, 1895, 1894, 1893 and 1892; in cents per pound.

Month.	1896.	1895.	1894	1893.	1892.
Copper (Lake):					
January	9·87	10·00	10 13	12·13	11·00
February	10·61	10 00	9·63	12·00	10·00
March	11 03	9·75	9·81	11·88	10·38
April	10·98	9·75	9·50	11·38	11·50
May	11·15	10·25	9·80	11·00	11·63
June	11·67	10·63	8·94	11·00	11·86
July	11·40	11·25	9·00	10·88	11·50
August	10 98	12·00	9·13	10·00	11·50
September	10 66	12·25	9·40	9·88	11·13
October	10·63	12·00	9·88	9·75	11·50
November	11·23	11·00	9·69	10·00	11 88
December	11·28	10·50	9·89	10·25	12·38
Year	10·88	10·76	9·56	10·75	11·55

In July the political contest made itself felt. The copper market was stagnant; orders for home trade fell off more and more, and the quantities available were all thrown on the foreign markets. While support from there was all that could be desired, values had nevertheless to suffer, and slowly but surely prices declined during that and the two following months, reaching about the lowest level in the second half of September, when influenced by the panicky condition of the stock exchanges and money markets, copper came down to 10⅝ to 10¾c. for Lake and 10¼ to 10⅜c. for electrolytic. These values ruled for some little time, with only slight fluctuations, but in the meantime home manufacturers had repeatedly to ask producers for extension of their contracts, a great many even preferring to cancel the purchases previously made. Several of the larger producing companies were considerably affected by this, and in the meantime Europe had to bear the brunt of the situation. It was then that the Calumet Company made a sale at 10½c. for both export and home trade, but the quantities taken up at this low figure were by far not as large as was anticipated.

Very shortly after this event, confidence more and more gained ground, and when the elections were determined, prices advanced very rapidly to 10¾ to 11c, at both of which figures very large quantities were contracted for, and very soon Lake copper reached 11¼c., with sales of electrolytic at 11⅛ to 11¼c., and casting copper at 11 to 11⅛c. At that time, orders which had evidently been kept back all came in at once, but after the first appetite was satisfied, the demand became very much quieter, and especially Europe declined to pay the high prices then established over here. Under these circumstances, values gave way somewhat, and at the beginning of December, Lake copper had to be quoted 11⅛ to 11¼c., electrolytic, 10⅞ to 11c., and casting copper the same price.

This condition continued during December; in fact, before the holidays set in values eased off in some instances still more, but during the last few days of the year a sudden and large demand sprang up, partly for export and partly for home trade, and the market closed very strong and with an upward tendency, the closing prices being: Lake copper, 11⅛@11¼c.; electrolytic copper, 11@11¼c.; casting copper, 10⅞@11c.

It will be noticed that values for casting copper have throughout the year ruled close to those for electrolytic, which is owing to the small production of this description of copper, as nearly all the raw material available is now being treated electrolytically.

London Copper Market in 1896.

The tendency of the copper market at the opening of the year was downward, partly owing to the unsatisfactory political outlook, and partly to the dullness characteristic of the season, with its pause in active operations at most manufacturing centers. The weakness of the financial situation in New York assisted the decline which ensued on our metal market, and which continued until near the middle of the month, when £40 10s. was accepted for cash g. m. b.'s., a fall of 30s. from December 30th. Meanwhile, Lake in America had declined to 9¾c., and the shipments thence were continuing on a very large scale, those for the first week in January alone amounting to 3,000 tons. Despite the lack of new business, however, the consumption of copper was undoubtedly very active, and a reaction soon took place in the trade generally, the fears of a premium on gold in the States having been removed, and, with it, the weakness on the Stock Exchange here, as well as the disinclination to speculation which had depressed the g. m. b. market. The change was marked by active purchases of g. m. b.'s, and the large transactions in consumers' copper, the English Admiralty alone taking about 1,500 tons of fine copper, while the higher values which resulted scarcely checked the general buying of tough and best selected qualities. In America there was more disposition to sell and, by way of exception to this rule, values there were well below the English parities. The stimulus to g. m. b. values were reinforced by active buying in connection with the manipulation of copper shares, and the last week of this month was marked by much excitement, the turnover amounting to 10,000 tons g. m. b.'s for the week, and an advance which reached £43 17s. 6d., ere the month closed. In the States fears had at last arisen as to a possible scarcity over there of consumers' copper, in consequence of the excessively heavy shipments, and sellers becoming more reserved, a rally took place, Lake recovering to 10·25c., while American consumers began to buy freely.

Early in February a dearth of best selected copper became apparent, supplies having been absorbed by the continued buying, which had been prolonged into the first week of this month. High conductivity bars had also been in very brisk demand and to obtain prompt delivery of this sort was a matter of considerable difficulty. One result of the heavy sales of refined copper was that smelters, whose stocks of raw material had become much depleted, turned their attention to Chile bars, large quantities of which were taken out of stock to be converted into best selected. During the remainder of the month, with an occasional lull, the demand continued good in England, on the continent and in America, Lake advancing to 11c., at which price a large sale was made by the leading Lake Company to home consumers, while g. m. b.'s rose with a few comparatively unimportant relapses, to £46 11s. 3d. "Strong" sheets were in fair request, but Indian demand had fallen away almost entirely. The values at the close of this month were as follows: £50 for tough, £51 5s. for best selected, £57 for strong sheets and £54 for India sheets, with yellow metal squares (for India) at 4¾d. Sulphate of copper was bought at £16 15s. per ton f. o. b. Liverpool for shipment to Boston.

The statistics for the month of February revealed an improvement of over 2,600 tons for the entire month, but only about 500 tons for the second fortnight, and as a much larger decrease had been counted upon, the effect was a general disappointment, and with Lake quoted lower from America, there was no speculative interest displayed, but, on the contrary, considerable pressure of sales, partly realizations, "bear" sales; and the market gave way to the extent of £2 per ton during the first fortnight of March.

The activity of consumption, however, continued, although the lower g. m. b. market deterred people from making any fresh purchases of importance; on the other hand, there was a big government enquiry (about 800 tons refined copper), and the scarcity of finest sorts becoming very pronounced, the margins over g. m. b.'s grew higher than usual and there was some disposition to abstain from purchases of refined sorts, in

favor of g. m. b.'s, and when the mid-monthly figures were published, showing a decrease of nearly 2,500 tons for the first fortnight, the market improved quickly, £45 17s. 6d. for cash g. m. b.'s being realized. This improvement was, however, not of long duration, the good effect of the statistics being neutralized by the advices of heavy shipments from America, while the political outlook in connection with Egypt and South Africa acted as a damper on speculation generally, and we witnessed the consequence in the shape of a relapse to £44 11s. 3d. The producers' returns also showed that production in the States was proceeding on a very heavy scale, the figures for the month of February being at the rate of 116,000 tons per annum, while the state of trade and finance over there gave rise to serious apprehensions.

The fact that, notwithstanding the large shipments above alluded to, the month of March witnessed a total decline in the visible supplies of 3,500 tons, naturally gave a certain amount of stimulus to the market, so that April opened in better tendency, cash g. m. b.'s rising to £45 12s. 6d. An interesting feature may be noted here in connection with the stock of Chile bars, which had been undergoing such constant depletion that in the eight months previous it had dwindled from 40,000 tons to 36,000 tons, while the London stock of Japanese bars had decreased from 3,500 tons to 890 tons. A consequence of this was a gradual lessening of the contango on three months', owing to the relative enhancement of the value of spot bars. A continuance of the large American shipments, greater accessibility on the part of producers on both sides to proposals for fresh business, together with the restriction in England at this juncture of consumptive demand by the closing of works for the holidays—these were the leading factors responsible for the fall which ensued from the point named above to £44 2s. 6d. toward the middle of the month; but the fact that despite America's huge production and heavy exports the figures of supply and delivery for the first half of April gave a decline, though a small one, was looked upon as a further proof of the very satisfactory scale upon which consumption was proceeding, and this produced a good effect upon the market, which recovered to £45 11s. 3d., easing off again to the extent of about 7s. 6d. before the close.

The month of May opened with limited activity in speculative operations, and values remained very steady during the first ten days without any feature of interest developing itself. The Board of Trade returns for the previous month clearly reflected the satisfactory state of consumption, both of raw and refined copper, but fresh purchases were only made very sparingly, while apathy continued to characterize the Indian market for copper and yellow metal sheets. About the middle of the month a fresh impulse was imparted to our market by the brighter news from the States, where large quantities of Lake were purchased at the advanced price of 11c. by American consumers, while Europe also bought freely, the rise which took place in the g. m. b. market rendering the values of American fine sorts less disproportionate than they had been of late to values on this side. Large purchases of g. m. b.'s were made, the bulk, perhaps, being for American account, and from £45 8s. 9d. on the 11th of the month the value rose quickly to £47 10s. This higher level bringing out some realization sales, we receded to £47 3s. 9d. at the close. Meanwhile, the price of Lake had again advanced, some of the producers obtaining 11¼c. with buyers over thereat.

Speculative buying continued in full swing during the early part of the following month (June), the purchaser being partly in cover of "bear" sales and partly with a view to higher values. This resulted in a rise to £47 18s. 9d., s. c., and after a temporary setback to £47 12s. 6d., there was a renewal of the strong upward movement, which culminated in the payment of £50 7s. 6d. for sharp cash on the 15th. As usually happens, the high prices induced realization, resulting in a drop to £48 12s. 6d. in two days, but the remainder of the month was steady at from £50 1s. 3d. to £49 7s. 6d. Consumptive demand continued quiet, though the various copper-consuming industries were very busy. In America, Lake, after rising to 11·75c., had receded to 11·50c. again, and shipments thence continued on a large scale, the figures for the month of June amounting to nearly 10,000 tons.

July was a rather dull month as far as speculation went, and after a comparatively firm opening under the influence of the good statistics, there came a decline from £49 13s. 9d. cash g. m. b.'s to £48 2s. 6d. on the 30th, the month closing about 7s. 6d. per ton better. The main causes of the decline were the continuance of the retrograde movement in America (brought about by the unsatisfactory state of finance, over there and resulting in a fall in the price of Lake to 11c.) and the persistently heavy shipments to Europe, where there was very limited demand on the part of consumers, notwithstanding that most works had very full order books. One cause of the small amount of buying was to be found in the fact that consumers had already laid in very considerable stocks under apprehension of a possible "corner," which had for some time been threatened by the action of a group of outside speculators who had been buying up large quantities of g. m. b.'s, but this eventuality was by the well-informed regarded as a "bugbear," for whereas, during the Secretan period, only Chile bars were deliverable as g. m. b.'s, at the present moment a whole host of recognized brands of tough, best selected, electrolytic and other sorts of fine copper, are included under the category of g. m. b.'s, and the list was added to at this time with the view of still further providing against even the off-chance of such manipulations succeeding. Accordingly, after repeated trotting-out of the said "bugbear," the thing died a natural death, without any palpable effect, beyond a transitory substitution of a backwardation of about half-a-crown upon three months' g. m. b.'s, for the customary contango. With respect to consumers' copper, we should here allude to the increasing competition of various makes of electrolytic copper with best selected, the former sort being produced in ever-increasing quantities and being sold, especially by America, at low prices. The consequence of this was a cheapening at this time of the margin formerly realized for best selected copper, which was, in fact, also suffering from over-production, in view of the increased use of the rival electrolytic copper.

Early in August there was rather better buying on the part of consumers, but the fears entertained in some quarters of a possible victory of the silver party in the United States led to very low prices being taken by Americans, who made, especially to the Continent, extensive sales during this month, and this reacted on upon the g. m. b. market, a decline from £49 1s. 3d. early in the month to £46 16s. 3d. almost at its close being the result. Lake had meanwhile come down, the quotation at the beginning of September being 10·62½c. The demand in England for manufactured copper was active, but India's apathy showed small sign of giving place to activity. Perhaps the most lively demand of all was experienced for high conductivity wire, which led to largish purchases by wirebar makers of the requisite copper.

September opened with a rise in g. m. b.'s from £47 to £48 8s. 9d. in sympathy with the advance which took place in Rio Tinto shares, the speculative purchases made being of considerable extent. The American market remained steady with Lake at about 10·75c. and with no great quantities of copper offered thence to Europe. In the States the attitude was one of expectancy, but the general trend of opinion was in the direction of confidence as to the election resulting in a victory for the "sound-money" party, in which event a great improvement in trade was expected, the fact being that the great uncertainty prevailing as to the issue of the momentous struggle between the conflicting interests of the silverites and the goldites had very seriously checked the progress of commercial and also industrial activity, leading to the closing of many works and to the exporting of huge quantities of copper which had for some time been flooding the European markets. The genuine activity of consumption on this side finds its most striking proof in the fact that, notwithstanding these huge imports from America, the visible supplies had been steadily decreasing, until at the end of September, they had touched the lowest point known for very many years past, 34,000 tons. As to the speculative market, there only remains to point out the reinstatement of the contango on three months, g. m. b.'s, the value of which had, during the greater part of August and September, been either level for the two positions (cash and three months) or with a slight backwardation on the latter. September closed at £47 15s. for cash and £47 18s 9d. three months.

October opened with a setback to £47 for cash g. m. b.'s in sympathy with the decline in tin and weakness on the stock exchanges, especially in Paris. The decline made further progress toward the middle of the month, and cash was depressed to £46 13s. 9d., while the contango on three months rose to 10s. per ton, the relative depression of the former position being chiefly due to heavy sales of the same, in connection with the carrying forward for three months of large quantities of copper, against the purchases made by the outside speculators alluded to earlier in this report. As the date of the United States presidential election drew near, numerous transactions in g. m. b.'s were entered into with the option for buyers of cancelling in the event of Bryan being elected. A few sales were also made with sellers' option to cancel should McKinley be elected. Before the month closed g. m. b.'s rallied to £48 5s., the end being about 5s. lower than that. As to consumers' copper, right at the end of the month, American producers were entirely out of the market, waiting the result of the election, and the tendency here was rather firmer, with more demand, best selected especially being in request, and correspondingly scarce, the consequence being that the margin which, as above mentioned, had dwindled considerably, had now recovered a good portion of the ground lost earlier in the year.

Early in November, on the defeat of the silver party becoming known, the g. m. b. market at once rose, and business in cash took place at rapidly rising prices, £48 18s. 9d. being done in the first week and in the second as high as £49 7s. 6d. In the following week the highest points were reached when cash changed hands at £49 15s. and three months at £50 7s. 6d. Lake meanwhile had advanced to 11¼c.; European consumers had been buying steadily at improving prices, and English tough and best selected copper had even bought by one of the large American export houses, presumably for shipment to the States, though possibly purely as a speculation. Manufactured copper continued in good request, but India sheets and yellow metal squares for India languished still, the famine and strike in India having deepened the depression which had so long characterized this market.

American shipments continued very large, those for the third week in November being, in fact, about the largest on record for a single week, 4,207 tons. The month closed with g. m. b.'s at £49 cash and £49 11s. 3d. three months g. m. b.'s.

The statistical position has not yet recovered to the point at which it stood in September, when the visible supply fell to about 34,000 tons as already mentioned, but the large increase of October (1,352 tons) has been partly wiped off by the result of the November stocktaking, the total visible supplies now amounting to 34,800 tons.

As to the general position of the copper trade, we have to report phenomenal activity in the various copper-consuming industries in Europe; the important engineering and shipbuilding branches and the government arsenals, etc., being very busy indeed, while the brass and ammunition makers are also full of work; and as to the requirements of copper for electrical purposes, these seem to be increasing on a large scale from month to month.

GOLD AND SILVER.

The table given herewith shows for 1895 the gold production of the world as closely in all probability as it can ever be ascertained, the figures taken from *The Mineral Industry*, Vol. IV., having been, in the few instances where it was necessary, corrected from official statistics received late in the year. For 1896 the production of the United States has been ascertained from returns given us by smelters, refiners and other producers who put the metal into final marketable shape. The returns are complete with the exception of the last month, or in a few cases the last week, of the year, and these have been closely estimated, so that the changes to be made hereafter will be exceedingly slight in amount. For foreign countries the figures are from official returns brought up to the latest possible date, with close estimates for the part of the year not covered by these statements. In most cases we have indicated below the source of our information. In Russia, for instance, the estimate for the year is based upon the official returns of the Imperial Mint for three-quarters of the year which have been cabled to us from St. Petersburg, and in every case no pains nor expense have been spared in obtaining the latest possible information.

The table shows that while the gold production of the world in 1896 presented a substantial increase over that of 1895, there was no such an extraordinary increase as has been anticipated in certain quarters. In

1895 the total in round figures was $201,000,000, while for 1896 the total approximated $218,500,000, showing a gain of about $17,500,000, or 8%. This is the largest production of the yellow metal ever recorded in a single year, but it still falls far below the wild estimates of $250,000,000 which have been circulated recently.

The fluctuations of the gold production are chiefly dependent upon the four great producers: The United States, Australasia, the Transvaal and Russia. These four countries produce over 80% of the entire gold supply of the world. The remaining countries in the list, while they fluctuate more or less, present relatively small amounts and their changes do not greatly affect the total. Of the smaller producers the most important is Mexico, and that country shows a marked gain; no other presenting a relatively equal advance.

It will be seen from our table that three of the four important producers remained almost stationary during 1896. The Russian output was practically the same as in 1895. The Transvaal showed an increase of less than $200,000, while Australasia decreased a little over $80,000 in the total amount. The United States shows a substantial gain, amounting to about 20% increase over the production of 1895, and its advance therefore represents two-thirds of the total gain in the world's production.

In the following pages we refer in detail to the gold production of the different countries.

THE UNITED STATES.

The total production of gold in the United States as ascertained by us amounted in 1896 to $57,000,000, showing an increase over 1895 of $10,169,200. This production was that made from domestic ores, and in addition our smelters and refiners report a sum amounting to $10,000,000 obtained from imported ores and bullion, which came in 1896, as in the previous year, chiefly from Mexico and British Columbia.

The increase in our gold production was somewhat widely distributed. A very considerable portion of it came from California where the work of opening new mines and reopening and extending old ones has continued with great activity throughout the year, and generally with encouraging results.

Colorado comes next to California with a gain of about $2,000,000; a very considerable proportion of this was from the Cripple Creek District, a special account of which is given below. On the other hand there was a decrease from the gold mines of the Leadville district owing to the strike which affected the gold producer as well as the silver mines of that camp. Not all of the gain in Colorado, however, was from Cripple Creek, since there has been a steady increase from the old and new producers of Gilpin County and other districts. From Montana and Idaho some contributions to the gain in gold production are also reported. In South Dakota there was very little variation, and the same report may be made of New Mexico, but there was an improvement in the Arizona production, and a considerable advance in Utah where the workings of the Mercur and other mines in that district have made great progress, and where a number of new mines in old and new districts have been opened. In Utah as in Colorado, during the last few years, the gold production has been gaining, while that of silver remains stationary or declined. In Alaska there was a gain in the gold production from the older mines, with a fair contribution from the far northern placers of the Yukon district, although this region still remains less productive than had been anticipated by some of those who have tried to "boom" the region.

In the Southern States gold mining has been practically stationary, although there has been a great deal of prospecting and other work done which may bear fruit in the future.

The silver production of the United States, ascertained in the same way as that of gold, amounted in 1896 to 45,465,173 oz., showing a decrease of 916,062 oz. from that of 1895. The value increased somewhat, the average price of silver for the year having been somewhat higher, reaching about 67c. for the year, as compared with 65·3c. in 1895 and 63c. in 1894. The increase in price, while not sufficient to actively stimulate mining or prospecting for new mines, was enough to enable some of the older mines to pay dividends and to induce nearly all of them to continue at work.

The production of silver in the United States from imported ores and bullion, chiefly from Mexico, with a much smaller amount from British Columbia, amounted to 40,000,000 oz. as compared with 28,193,524 oz. for 1895. By far the greater part of the Mexican bullion continues to come to this country to be refined. The amount of silver obtained from the British Columbia ores is comparatively small, the greater part of the ores from that Province being valued chiefly for their copper and gold.

GOLD MINING IN THE SOUTH.

BY WILLIAM M. BREWER.

Early in 1896 there was considerable activity evinced by prospectors in their attempts to locate paying gold mines in Georgia and Alabama. The fields were visited by promoters from the North, the West, and also from England. Their operations, however, have been so slow that the Mint returns for 1896 will show but a very small increase, if any, over those for 1895. Such old properties as the Camille in Haralson County, Ga., and the Idaho in Clay County, Ala., have been reopened, the old workings cleaned out and extended, new machinery added to the plants already existing and operations conducted, apparently with satisfactory results. So far as the Alabama proposition is concerned I have every reason for forming the opinion that gold mining in the district in which the Idaho mine is located will be carried on in the future with profitable results. With regard to the Camille in Georgia, I am reliably informed that recently a cave occurred in the workings which will render it necessary to expend some $1,500 in either cleaning out the old workings or in opening new.

Villa Rica, in Carroll County, Ga., has been the scene, during 1896, of some very active operations, but it is impossible to ascertain whether they have yielded satisfactory results. If the fact of continuance of work and extending purchases of property indicate that the industry has been satisfactory in that vicinity, then we must form such an opinion, because work has been prosecuted steadily and adjacent properties have been optioned by the operators already in the field.

Lack of water supply has been the reason assigned for not carrying on work in the Silver Hill district in Tallapoosa County, Ala., continuously during the year. The Hall Brothers, of Atlanta, who have this property in charge, claim that during the time operations have been active the results have more than paid expenses, but that the trouble they have experienced all the time in amalgamating the graphitic ores of the district has not been entirely overcome.

At the Pinetuckey mine, in Alabama, work has been carried on during the year in prospecting, with a view of resuming operations in the mill at an early date, provided the prospecting demonstrated that such could be carried on profitably. The Hicks-Wise mine, in Cleburne County, changed hands during the past summer, but no work has been attempted there yet. This was the property which was actively operated in 1893 by a Colorado man who abandoned it on the expiration of his option because of the panic which rendered it impossible for him to obtain the capital necessary to operate it on as extensive a scale as the thickness of the ore body and grade of the ore warranted.

The Creighton mine, in Cherokee County, Georgia, and the Walker mine, in McDuffie County, have been regular bullion producers during 1896. The Dahlonega District, in Lumpkin County, Ga., as well as the dredge boats on the Chestatee River, have been bullion producers, but whether any one particular mine has been a regular monthly producer and is on a dividend-paying basis cannot be definitely ascertained at this time.

GOLD PRODUCTION OF THE WORLD.

Countries.	1895. Reported Ounces.	1895. Fine Ounces.	1895. Kilograms.	1895. Value.	1896. Reported Ounces.	1896. Fine Ounces.	1896. Kilograms.	1896. Value.
North America:								
United States	.....	2,265,612	70,740	$46,830,200	.....	2,757,620	85,773	$57,000,000
Canada	110,881	92,449	2,876	1,910,921	.....	133,043	4,138	3,750,000
Mexico	.....	270,924	8,427	5,600,000	.....	338,123	10,516	6,989,000
Central American States	.....	23,222	722	480,000	.....	24,127	750	498,705
South America:								
Argentine Republic	.....	4,500	140	93,015	.....	4,500	140	93,015
Bolivia	.....	3,144	98	65,000	.....	3,300	103	68,211
Brazil	.....	108,000	3,359	2,232,360	.....	120,000	3,732	2,480,400
Chile	.....	22,550	701	466,209	.....	23,000	715	475,410
Colombia	.....	154,000	4,890	3,183,180	.....	150,000	4,665	3,100,500
Ecuador	.....	3,800	118	78,546	.....	3,800	118	78,546
Guiana (British)	122,936	104,987	3,265	2,170,081	.....	115,400	3,589	2,385,318
Guiana (Dutch)	.....	28,219	878	584,795	.....	27,328	850	564,870
Guiana (French)	.....	90,280	2,808	1,866,088	.....	90,792	2,824	1,876,671
Peru	.....	3,650	113	75,445	.....	3,858	120	79,745
Uruguay	.....	6,884	213	141,600	.....	6,884	213	141,600
Venezuela	.....	41,200	1,281	851,600	.....	41,200	1,281	851,600
Europe:								
Austria-Hungary	.....	88,500	2,753	1,829,300	.....	88,500	2,753	1,829,300
France	.....	11,640	362	240,600	.....	11,640	362	240,600
Germany	.....	114,037	3,547	2,357,144	.....	115,741	3,600	2,392,366
Italy	.....	9,002	280	186,071	.....	9,002	280	186,071
Norway	.....	500	16	10,335	.....	500	16	10,335
Russia	.....	1,537,584	47,825	31,781,851	.....	1,528,742	47,550	31,599,097
Sweden	.....	30,225	940	624,750	.....	30,225	940	624,750
Turkey	.....	392	12	8,000	.....	392	12	8,000
United Kingdom	.....	6,600	205	136,422	.....	6,000	186	124,020
Asia:								
China	.....	225,000	6,998	4,650,750	.....	250,000	7,776	5,167,500
India (British)	249,355	218,185	6,786	4,519,894	332,000	290,400	9,033	6,002,568
Japan	.....	21,000	653	434,070	.....	25,000	778	516,750
Korea	.....	10,000	311	206,700	.....	10,000	311	206,700
Malay Peninsula	.....	5,000	156	103,350	.....	5,000	156	103,350
Africa:								
Transvaal	2,549,036	2,080,013	64,697	42,993,869	2,560,357	2,089,251	64,984	43,184,818
Other countries	.....	75,000	2,232	1,550,250	.....	100,000	3,110	2,067,000
Australasia	2,350,562	2,070,335	64,395	42,793,824	2,400,811	2,114,142	65,568	43,709,322
Indian Archipelago	.....	2,500	78	51,675	.....	4,500	139	92,715
Totals	.....	9,728,934	302,875	$201,107,895	.....	10,522,010	327,081	$218,499,853

Judging from present indications there should be considerable activity in gold mining in both Georgia and Alabama during 1897, and I hope that the operations will be carried on in such a manner as will enable the determination of the value of the gold fields of these States. The methods adopted by the gold miners in the South and the limited crushing capacity of the mills, are responsible for the comparatively small output of the precious metal, and also for the length of time requisite to determine the value of the various districts, and their capacity as gold producers. It is very rarely that either promoters or prospectors do their work in such a manner as to determine any material facts with regard to the properties. It is hard to say whether it is lack of confidence in the deposits of ore, lack of capital to carry on work, or lack of competency on the part of the operators, that have resulted in this condition, but the probabilities are that a combination of these reasons is responsible in nearly every instance.

CRIPPLE CREEK IN 1896.

BY OUR SPECIAL CORRESPONDENT.

Your correspondent in an article in this paper on February 2d, 1895, on Cripple Creek, stated that "1892 was the speculative, 1893 was the prostrative, 1894 was the paralyzive, 1895 was the progressive," 1896 was the crucially progressive period. The fires in the month of April destroyed over $2,000,000 worth of buildings. The merchants were prosperous before the fires and were assisting out of their surplus earnings the miners of the camp. After the fires the stores and residences had to be rebuilt, restocked and refurnished; money was borrowed at high rates of interest, and consequently, with no foreign or Eastern money coming into the camp, and the source of the local supply shut off, prospecting for a while ceased, and the leasing system, which has been so successful for the owners—not always for the tributers—received a serious setback during the summer months.

On January 1st no less than 75 leases expired and the properties reverted to the owners. The result was that in December, prior to the expiration of these leases, the lessees made every effort to take out all the ore possible, without regard to the future of the mine. On January 1st the owners found their properties fairly well gutted, necessitating a large amount of development work and extensive timbering before the mining of ore was done on a large scale.

Improvements for the year were as follows:

Name of hill.	1895.		1896.	
	No. of steam hoists.	Surface improvements.	No. of steam hoists.	Surface improvements.
Gold	22	$22,000	19	$29,000
Globe	3	1,800	9	4,200
Raven	12	36,000	10	8,600
Bull	27	30,000	27	43 500
Battle	5	140,000	15	175,000
Other hills	11	47,000	19	16,000
Total	80	$276,800	99	$276,300

There were more steam hoists erected than given above, but the lessees would sometimes close their works and move to other prospects.

In addition there were 13 new air-compressors erected at a cost of over $70,000. In 1894 there were only two compressors at work in the camp and one compressor idle; to-day there are 22 compressors.

Three samplers were built during the year, of 200 tons' capacity each, costing in the aggregate $110,000. The total for surface improvements, exclusive of mill improvements, has been $456 300.

The dividends declared and paid by public mining companies operating in Cripple Creek during the year amounted to $986,000: the amount paid by private individuals and companies whose stock is not on the market was $460,000, making the total dividends $1,446,000.

The output of the camp for 1896 has been approximately as follows:

Name of mill.	Tons.	Gold in oz.	Value.
Brodie	11,681	11,634	$232,682
El Paso	14,907	22,026	440 510
Florence	39,045	42,949	858 990
Metallic Extraction Company	36,000	30,000	600,000
Beaver Park	6,000	3,600	72,000
Colorado City	8,000	5,600	112,000
Other mills	800	520	10,400
Total	116,433	116,329	$2,326,582
Smelting ore, 84,659 tons at $80 per ton			$6,772,720
Grand total			$9,099,300

showing an increase of $2,129,285, or a fraction more than 30½% over the preceding year.

The production of gold in 1891 was $2,300; in 1892 it was $585,010; in 1893 it was $2,010,367; in 1894 it reached $3,250,787; in 1895 it more than doubled, amounting to $6,970,015; in 1896 it reached, as above, $9,099,300; making a grand total of $21,917,779 from the camp.

The new shippers that have done well toward increasing the tonnage and output of the camp are as follows: Arcadia, Marinette, Gold Coin, Little May, Lillie, Vindicator, Theresa, Legal Tender, Moon-Anchor, Granite Hill, Christmas, and the Hallett & Hamburg. There have been many others which have made shipments, but the output does not count much.

Tunnels.—About 2¼ miles of tunnels have been driven during the year, costing $112,000.

Mining Labor.—The number of miners employed in Cripple Creek is 2,500, the number employed both at surface and underground is about 3,000; the number of fatal accidents during the year 26, or a death rate unparalleled in modern mining, and a disgrace to Cripple Creek and to Colorado. European countries have a death rate of from 1 to 1·50 per 1,000. This unnecessary loss of life should receive immediate attention at the hands of the State legislators.

Patents.—On December 14th, 1895, the number of patents applied for was 174; on December 12th, 1896, the number of applications was 318, an increase of 183%; on April 18th of this year applications for patents numbered 229 as against 74 for the corresponding date in 1895, an increase of over 300%. It may also be noticed that while last year the patents applied for were mostly single claims, this year the applications are largely for groups of claims.

Explosives.—The quantity of explosives consumed during the year in the mines was 750 tons.

Battle Mountain was the banner hill of the camp in 1895; this year Bull Hill takes the lead, and has increased its amount in the same ratio approximately as Battle Mountain decreased.

THE LEADVILLE DISTRICT IN 1896.

BY OUR SPECIAL CORRESPONDENT.

The mining world has long been aware that Leadville is involved in a great labor struggle—a struggle in which less than 20 mine managers are congregated on one side while the entire Western Federation of Miners is arrayed on the other. This great strike was inaugurated on June 19th, 1896. Since that time I have from week to week recounted the progress of the labor troubles in this *Journal*. Therefore, at this time it suffices to say that from four to five months, June to October, the big mines of the camp practically ceased operations and it was left to a few lessees to furnish the small production which the figures of the annual output will show for those months. Some of the properties that closed down at that time have not resumed work and some of them never will. The damage to the camp will never be fully known. Enterprises that were on foot when the strike was inaugurated were never broached again, while developments in many parts of the camp which had been mapped out were let alone. Many enterprises were already under way, but the strike crushed them to the ground.

After four months, during which time nothing was accomplished and the mine managers saw that the miners were willing to be led by a handful of unprincipled leaders, they (the mine managers) determined to fight this strike to an end and not be dictated to by the Federation. The Coronado and the Small Hopes combinations took the initiative and non-union men were put at work. The blowing up of the Coronado, the loss of life, the attack on the Small Hopes group and the coming of the soldiers (who are still here) are incidents still fresh in the minds of readers.

Cause of the Strike.—In 1893, when the price of silver was almost cut in two the mine managers drew up an agreement with the miners (who were then united as the Knights of Labor) to pay $2.50 a day until silver reached 83c. The majority of the miners have during the past 18 months joined the Western Federation, and when they made their demands declared that their signatures to the 1893 agreement could not be held against the Federation. While the mine managers during 1893 paid $2.50 a day they found during the past two years that skilled labor was worth more than the unskilled, and consequently many of the mines, especially those which could afford it, paid the men $3 a day. As a result, when the strike was inaugurated, at least 70% of the miners in the camp were receiving $3 a day. But the Federation demanded that all mines must pay that scale to all labor, and it was here that any hope of an amicable settlement was abandoned at the start. The union demands that the unskilled laborer, the trammer, the top-man, etc., must also get $3 a day. It was this demand that caused the big lock-out. It was this that made the mine managers determined that no union should dictate to them, and to-day the fight is waged against unionism. The edict has gone forth to stand that "No Union Men Need Apply."

Since October 1st the Ibex, the Resurrection, the Bison, the Chip, the Mahala, the Sedalia, the Emmet, have all resumed work with imported miners, and the end of the year sees the production of the camp again forging to the front despite the continuance of the strike. However, there is a continual annoyance under existing conditions, and the big mines of the camp are operated under guard both day and night.

Other properties are to be started up at an early day. The most important proposition is that known as "The Leadville Basin" or "Downtown" mines, which includes the Bohn, Bon Air, Maid, Henriett, Weldon, Northern, Newell, Wolftone, Penrose and other old-time producers. The pumping proposition in this section has for a long time been a menace, and there has been a great deal of wrangling as to how the expense should be divided. I have it from very excellent authority that during December a contract good for a period of eight years was signed which will settle this difficulty. This contract, entered into between all parties in interest, owners and lessees alike, sets forth that each producing property is to pay its *pro rata* of the cost of pumping. It will take about 90 days to drain this basin after the pumps are started, after which a production of 500 tons daily can be looked for from this section.

The production of the camp in December is 1,000 to 1,200 tons of all kinds of ore daily. Had it not been for the strike the output would have been in the neighborhood of 2,000 tons daily. During the month of May the production was nearly 1,500 tons daily, and this tonnage was being steadily increased. In fact just a few days before the strike the Mahala Mining Company increased its shipments 50 tons a day, and it had already been announced that a number of new shippers would be added to the list before the end of the month. On June 12th, just a week before the strike, a syndicate of Boston capitalists arrived, and after looking over their big tract of land, Northern & Leadville Basin properties, arrangements were at once put under way to operate on an extensive scale, but this work, like many other propositions, took wings with the strike.

In addition to some scattering leases the properties that are to-day making up the biggest part of the tonnage of the camp are the Mahala, Ibex properties, Small Hopes combination, Lower Henriett, Resurrection, Bison, Big Four, Sedalia, Morning and Evening Stars, Robert Lee, Catalpa-Crescent, O. K., Sulphide Mining Company, Little Chief, Denargo, Lillian, Yankee Doodle and Vinnie.

A great assistance to the camp during the year were the shipments of manganiferous iron or manganese ore. There are great quantities of this class of ore in this camp, and up to 1896 the only market to be found was in Pueblo. Early in March last Geo. W. Cook, the Western agent of the Illinois Steel Company, succeeded in getting satisfactory railroad rates from Leadville to Chicago, and made a contract for several hundred tons daily. Shipments at once commenced from the Catalpa-Crescent and Sixth street properties. When the strike came on the latter mine refused to pay the schedule demanded and closed down. The other two properties, however, continued to pay the scale and are shipping 150 tons a day.

An important enterprise for the camp, the good effects of which will be felt as soon as the strike is settled, is the erection here a few months ago of a cyanide mill which was built by the Gold & Silver Extraction

Company. The mill was completed shortly after the strike was inaugurated and some ore has already been treated satisfactorily.

I give below in brief a review of the most important work carried on each month during the first half of 1893 up to the time that the great strike was inaugurated.

January.—A 4-ft. body of gold ore was opened up in the Big Six, running as high as 8 oz. gold. In the Belgian a number of rich pockets were encountered and $50,000 in mineral was shipped during the month. The New Elkhorn Mining Company (Limited), of London, Eng., purchased the Fitzhugh group, on Fryer Hill, for about $800,000, and at once inaugurated new and important development work. Ex-Governor Grant and others inaugurated a big enterprise on Printer Boy Hill—they started a tunnel on the Winan and Eclipse lodes to cut the rich ore chute of the Lillian. On the gold belt, the Cleveland, Big Four, Louise, Little Ellen, Kohinoor and others were all engaged in new development work. The Mahala, located its old ore chute in new and undeveloped workings and resumed shipments of 100 tons daily. The Union Leasing Company started a new shaft in Big Evans Gulch to develop entirely new territory. The Bison increased its shipments to 150 tons a day. Operations resumed on the First National property in Iowa Gulch.

February.—The great Yak tunnel was fast being pushed ahead and was piercing Breece hill. The Belle of Granite was sold for $20,000. Diamond drill operations were begun in the Emmet, Resurrection, Little Johnny, Forest Queen, Chrysolite and a number of other mines. The Alps Leasing Company started a new shaft in the upper end of the South Evans Gulch. Several big and new ore bodies were opened up in the Bohn on the first contact. The Big Four, owned by Chicago people, developed into a big producer. A 7-ft. streak of carbonate ore was opened up in the Katy property running 40% lead, ½ oz. gold and 7 oz. silver. The celebrated Little Johnny (Ibex companies) properties increased their shipments to 200 tons a day and also began important new development work. Big strike in the Columbia group on Long & Derry Hill; a vein of ore uncovered showing brittle silver and running as high as $3,000 to the ton. Litigation over the Fanny Rawlings settled and new lessees started up the property. Strike of a good body of ore in the Lillian assaying 1½ to 3 oz. gold. The Turbot Leasing Company, opened up another new ore body and increased shipments to 60 tons daily.

March.—Selma Mining Company resumed operations. Wolftone shipments showed a heavy falling off from the old workings, and rumors of a strike did not encourage any attempts at new work. The Vivian Mining Company was incorporated to operate on an extensive scale the Dome, Rock, and '76 claims on Rock Hill. Increase of shipments noted from many of the old producers, and the output was run up to 1,600 tons a day. Renewed activity in Empire, and Big and Little Union Gulches. Geo. Campion secured a lease on the Niles Augusta and began operations. The Long & Derry litigation was ended, and the property opened up by new lessees. The Virginius and Monarch were started up by the Monarch Mining Company.

April.—The Agwalt tunnel was run by T. S. Wood to catch the Ibex ore chute. Resurrection company extended its operations: also began shipping after expending $70,000 in developments. The Eurydice resumed operations. During the month three distinct portions of the camp became conspicuous by new discoveries. The finds were made in Big Evans and South Evans gulches, and on Carbonate Hill. The Holland Mining Company obtained a lease on five claims near the new shaft of the Union Mining Company, and also started a new shaft. The Cleveland new shaft was also started. The Mab Mining Company formed and began important operations near the Mahala to catch that ore chute. A company was formed to actively develop the R. E. Lee, and work was begun.

May and June.—Work on the Mab, Rialto, Mahala and Wm. Wallace being pushed ahead vigorously. London mine resumed operations. Nisi Prius broke into a fine ore body. Small Hopes combination inaugurated important new work. First National and Stewart group in Iowa Gulch opened up rich ore. Increased production from all the old properties and much new work mapped out for July, all of which is crushed out by the strike.

The Smelters.—Leadville has five smelting plants. They have all shut down with the exception of the Kansas City Smelting and Refining Company. The Bimetallic held on as long as possible, but closed down about two months ago. The Arkansas Valley people had a hard struggle to get ore for a time, but are now receiving about 400 tons daily.

MEXICO.

It is not an easy task to obtain returns from Mexico for the full year 1896 from mining companies or railroads, even allowing for an estimate of the production in the last month of 1896. This does not arise in any way from a disinclination on the part of these corporations to afford information which will be of interest to all the readers of the *Engineering and Mining Journal*, but simply owing to distance and delay in gathering up the details in a country which, until a few years ago, thought that to-morrow (*manana*) was better than to-day.

This is not the case now, and the result is that Mexico shows a greater increase in the production of precious metals than any other country which has been a producer for centuries.

As they modestly say in their official reports, and in fact considering the still existing lack of transportation facilities in the country, the development that has taken place during the past year would entitle them to claim more.

It is impossible to give tonnage at the present time, but as to values we can furnish these from official returns for nine months of the past year, and basing our calculation on this average of nine months we can very closely approximate the total for the year, as we know from reliable private sources of information that the last quarter of the year will exceed the preceding.

With regard to tonnage reduced at all the smelting works and custom mills during the past year we shall be in a position to give our readers in the course of a few weeks such returns made from the actual tonnage figures as handled and delivered by railroads and freighters.

As to values, we will start with those of precious metals imported into the United States, viz., gold and silver coin and bullion. Gold for 10 months ending October 31st amounted to $3,002,794, against $2,135,147 in the corresponding 10 months of 1895, and as the month of October, the last published by the Treasury Department at Washington, still shows a large increase over the preceding year, it is only fair to suppose the exports from Mexico under this head to this country alone will amount to more than $3,603,000 in value.

In silver from Mexico there was some falling off in values imported into this country from Mexico, the Treasury official report for the ten months giving $7,199,321 as against $7,909,177 in 1895. Therefore the total for the year is not likely to exceed $8,640,000.

To these figures we have to add the value of gold and silver imported from Mexico in the form of ore, which on the average of the first months of the year would amount to about $1,500,000, thus making the gold production from Mexico, which the Republic has sent to this country $5,103,000.

The value of silver imported in ore from Mexico so far as can be gathered from the reports of the Treasury Department, amounted to about $13,750,000, which, added to the amount in coin and bullion, makes an amount of $22,390,000.

Now, taking the Mexican government figures, though they cover a less period than ten months, yet they are to our knowledge accurately made up, and naturally cover exportation to other countries. It is impossible for the Mexican government to give a more accurate return of the gold product than that obtained through their mint returns (which show an insignificant amount of gold coined), and the foreign exports, owing to the fact that the country is on a silver basis. These exports for the past year will have amounted to $5,800,000, to which has to be added from our previous experience and information furnished by reliable authorities 15% for exports made without any return, 2% for undervaluation, 0·5% used in the arts in Mexico, 1% (possibly more now, with the increasing prosperity of the country) retained in the banks, 2% in circulation, making a total of 20 5% to be added to the official return, which brings up the production of gold in Mexico to $6,989,000 for the past year.

With regard to the silver production, statistics of Mexico, from their official returns, show a like increase over the corresponding period of 1895.

The Mexican government figures—with the addition from private sources since received embracing the largest producers in that country—show that the production of silver in Mexico during the past year has amounted to $48,160,000 oz., and, in place of indicating any falling off, there is every evidence of vitality and possible further increase.

There is a possible production and exportation of silver that is not included in the government returns, but it is small, and the figure given may be taken as substantially correct. In our estimate we have taken into account the increasing amount of currency required by the country, and for that reason do not figure exactly on the amount of bullion and coin exported.

Copper is now quite an important product of Mexico, and is used to a certain extent in the country, but as the supply far exceeds the home demand, it is exported to the United States and Europe. That which finds its way to this country enters chiefly in the form of matte, and is refined into casting or electrolytic copper. What goes to Europe is blister copper, or approximately so, from the Boleo mine in Baja, Cal. At the same time the enterprising firm of Guggenheim has established its works at Aguas Calientes, adding very considerably to the copper product, and the increase of matte shipments from St. Luis Potosi and Monterey make a large difference from former returns. To judge from the official figures at our disposal, the amount of copper produced will not be less than 22,000 metric tons, the greater production, as usual, from the Boleo mines.

The production of quicksilver can only be approximated from imports, as the native production is far short of the requirements of the country. In 1895 the amount imported was 818,704 kilos, with a value of $541,664, while during the past year the amount imported was 854,526 kilos, with a value of $574,153. The only inference to be drawn from these figures is that the production in Mexico in the past year as compared with 1895 has not increased, and the figures of production given in the *Engineering and Mining Journal* of 1895 may be accepted as correct for 1896.

There are many developments going on most prosperously in Mexico at present. We mention one State on the Pacific Coast—Sinaloa—which has 14 mines from which we have reports, all paying dividends, with a total production that enables the Culiacan mine to coin about $4,000,000 a year.

OTHER NORTH AMERICAN COUNTRIES.

Canada.—The gold production of Canada shows an increase of some proportions. The Nova Scotia mines contributed 25,000 oz. of the total, and generally did well in 1896. The Ontario mines show little change, though a good deal of attention has been directed to the Rainy Lake region, where large bodies of low-grade ore are said to exist. The chief mining developments of the year, however, have been in British Columbia, where the rapid development of the Trail Creek and Slocan districts, with their large bodies of smelting ores, has attracted a large number of miners and is building up an important industry. There is no doubt that good mines are to be found in British Columbia, but a large crop of wild cats has sprung up with them which may injure the country if not checked in time.

Central America.—The riches of the Central American states are still in large part undeveloped. Cost Rica and Nicaragua especially offer inducements to miners, and some attention is being paid to the Nicaraguat placers. The production as yet is not large.

SOUTH AMERICA.

The South American mines have contributed their share to the world's gold output, but no special event has marked the year 1896. In Colombia, Ecuador and Venezuela there has been an output derived chiefly from placer workings, which varied little from that of 1895. The reorganization of the Playa de Oro Company in Ecuador has so far been followed by very small results in the way of actual output. There are great possibilities in these states, which furnished a very large part of the world's output of gold some three or four centuries ago; but at present they await development.

In Brazil some improvement has been shown at the St. John del Rey, which reports a total of 37,000 oz. for the year. The Ouro Preto Com-

pany has had its mines and mills steadily at work during the year. At some of the smaller mines work has been carried on, but with no notable changes or developments. Upon the whole, little change can be noted.

The same may be said of the Argentine Republic, where there is a small production from placer mines. Discoveries have been reported from Argentine, Patagonia, but nothing has been done toward working them. In the neighborhood of Terra del Fuego a beginning has been made of systematic work, but so far with little result.

Chile and Peru show very slight changes. In Chile some discoveries are reported of copper ore carrying gold, but they are at present remote from all transportation, and no extensive developments are expected until they are reached by the railroad extensions now planned.

Bolivia continues a large producer of silver and also reports some gold. The great Huanchaca mine, which suffered from an extraordinary influx of water in 1895, was last year in much better condition, and it is not improbable that it will soon resume the payment of dividends, which had been suspended for several years. In the central part of Bolivia, on the eastern slopes of the Andes, very rich placers are reported to exist. Some of these have been worked in a desultory way, and efforts to explore them systematically are soon to be made.

EUROPE.

In the older European countries there is but little change in the gold production from year to year. Germany and Hungary are the largest producers. Most of the gold, as well as the silver, in Germany is obtained as a by-product in connection with other metals. The gold mines of Hungary are the oldest and were for a long time the most noted in Europe. Although their output is somewhat less than that of Germany it is still much greater than that of any other European country, with the exception of Russia; it amounted in 1895 to 2,753 kilos, and in 1896 was very nearly the same. The returns of gold production in Germany, as furnished by the Imperial Statistical Department, have recently been corrected and the amount considerably reduced, probably by excluding the amount obtained in German works from foreign ores, although this is not very clearly stated in the report. The production as officially reported with the corrected figures for the six years ending with 1895 was as follows:

	Kilos.	Value.		Kilos.	Value.
1890	2,281	$1,586,500	1893	2,551	$1,774,250
1891	2,432	1,693,000	1894	3,204	2,232,750
1892	2,553	1,776 250	1895	3,547	2,357,144

In France there is a small production, chiefly, as in Germany, obtained from ores of other metals as a by-product; it varies very little from year to year. The same absence of variation is observable in the gold production of Italy, which is obtained principally from placer mining in Piedmont and in the foot hills of the Alps.

Sweden has a small production, partly from placer mining and partly won in connection with copper. In Norway a single mine has been at work for several years, and during the last two or three years an average of about 500 ounces a year has been the product.

The United Kingdom owes its gold production chiefly to the Welsh mines, which have been worked intermittently for a number of years. In 1895 the production increased, owing to the discovery of one or two veins of some importance, but in 1896 there was a slight falling off. There is some talk of reopening the mines in Scotland, which were worked 500 years ago.

A small production from Turkey has been reported for a number of years; its amount is conjectural entirely, in the absence of all reliable statistics. The Turkish government makes no effort whatever to collect information of this kind, and there are no private parties sufficiently interested in it to make up for the deficiencies of the administration.

Russia.—Russia, in which is included Russian Siberia, is the only large gold producer among European countries, and is the fourth gold producer in the world, its output forming from 15% to 18% of the total. By far the larger part of the gold production comes from Siberia, the only extensive gold-bearing district within the limits of European Russia being found in the Oural region. Finland produces some gold, but the amount is not important. The Oural was for many years the most important district, but the extension of settlement and exploration into Eastern Siberia gave that section of the empire the predominence, which is still more marked since the opening of the great placers on the Amour and its tributaries, and on the upper waters of the streams which unite to form the Lena. Production in that district is gradually increasing, and when it is made more accessible by the completion of the Siberian Railroad, the Trans-Baikal and the Amour Valley will probably become the chief seat of gold production.

We have received the official returns of the Russian Imperial Mint for a series of years. These returns are complete up to the close of 1895, and include also the receipts for the first nine months of 1896. On this basis we are enabled to give very closely the production for the year just closed as well as that for the preceding year. Under Russian law all gold mined must be deposited in the Mint, which has branches for its receipt placed in all the gold producing regions. Theoretically, therefore, the Mint returns should represent the total production, but it is customary to make an allowance for evasions of the law for gold held back by miners or stolen outright by workmen. From the best information 10% seems to be a moderate allowance. Some authorities estimate it at a higher point, and engineers well acquainted with the placers of the Argoun, Blagoviestschensk, Dagourskaia and the Onon in the Trans-Baikal, put the amount withheld at from 20% to 25%. As these placers, however, are largely worked by independent parties of trappers, and are, moreover, near the Chinese frontier, they present particular advantages for this kind of work. Upon the whole, 10% seems to be a fair allowance. Adding this to the Mint returns we have the following table for the production in Russia for six years ending with 1896:

	Kilos.		Kilos.		Kilos.
1891	39,983	1893	35,619	1895	47,825
1892	39,161	1894	39,913	1896	47,550

By far the greater part of the Russian gold is obtained from placer mining. Quartz mining is carried on in the Oural District, but in Eastern Siberia there are only two small quartz mills at present in existence. This is not due to the absence of known quartz veins, but rather to the enormous expense and difficulty which has attended the transportation of heavy machinery through the Siberian wilderness. A large part of the Amour basin, however, is now accessible by the river freight steamers running up from the Pacific coast. In two or three years more probably the greater part of the gold-mining region will be accessible by the Siberian Railroad, which is already in operation for 1,500 miles eastward from the Oural Mountains, and for 350 miles westward from Vladivostok on the Pacific coast. The advent of transportation will probably be followed by the introduction of machinery on a large scale, the beginning of quartz mining in a systematic way, and the operation of many placer districts which have been heretofore neglected because their yield was too low to be profitable at the cost of labor, fuel and supplies. These costs will be largely reduced by railroad transportion, and it may be added that Siberia can furnish a very considerable quantity of mineral fuel, when its mining is made possible by convenient transportation.

Some gold has been found in the Caucasus, but operations there have never been conducted on an extensive scale. The Oural District and Eastern Siberia must be regarded as the basis of the gold production.

Silver production in Russia has never been very large. At present the silver is obtained chiefly in Siberia from the government work in the Semipalatinsk and Oudinsk districts. There are a few private mines, but most of the workings are the property of the government. Silver is also obtained in the Caucasus, from silver-lead ores and from zinc-lead ores. In this case the amounts reported by the Mint are probably close to the actual production, since the conditions of the silver output do not give the same opportunities for evasion of the law as exist in the case of gold. The production reported in 1894 was 8,578 kilos of silver. In 1895 it was 12,108 kilos, and in 1896 taking the amount cabled to us from the Imperial Mint and estimating closely the last quarter of the year we have a total production of 13,468 kilos. The production is therefore showing an increase. As in the case of gold, this will probably continue on a considerable scale. The recent opening of the Siberian Railroad from Nertschinsk to Omsk brings the railroad within a short distance of the extensive silver-lead deposits in the northern spurs of the Altai, which have not been worked because it was impossible to obtain supplies of fuel for smelting, or to transport ores at a reasonable rate. Upon the whole, Russian silver production as well as that of gold has a great future before it.

ASIA.

Not many Asiatic countries are large producers of gold, with the exception of Siberia, which in these statements is included with European Russia, as the reports of the Empire do not distinguish the product of its different sections.

Japan has a moderate output of gold, chiefly obtained in connection with other metals. The great island of Formosa, which is now a Japanese possession, is reported to contain extensive gold fields which have been worked a little, but only in a superficial way.

In the Malay Peninsula, which is chiefly noted for its tin mines, some gold has been found in alluvial workings, and quartz mining has also been begun. Several companies, of which the Jelebu and the Punjour are the principal ones, are at work in the peninsula.

In India, the Colar gold-field in Mysore is now the seat of a well-established industry. Four companies, the Champion Reef, the Oaregum, the Nundydroog and the Balaghat-Mysore, have large mills and extensive workings and have been regular dividend-payers for some time, and several other companies are operating in this field on a smaller scale. The output of the field reached in 1896 a total of 330,000 oz. In Upper Burma, where development is comparatively recent, the Chonkpazat gold mine was at work during the year, and in 10 months reports 2,673 tons of ore crushed, with the recovery of 805 oz. gold.

The gold production of China has always been somewhat of a mystery. No reliable statistics can be obtained—and this is true of all Asiatic countries, except India and Japan; and the output must be estimated entirely from a comparison of the exports and imports. The same thing may be said of Korea, but in that country mining concessions have been granted to French and American parties, who will soon be at work.

AFRICA.

The Transvaal.—The production of the leading district, the Witwatersrand, is given in the table below by months for five years, in crude or reported ounces, the fine ounces for each year being given in the last line of the table:

GOLD PRODUCTION OF THE WITWATERSRAND.

	1892. Ozs.	1893. Ozs.	1894. Ozs.	1895. Ozs.	1896. Ozs.
January	84.560	108,374	149 814	177,463	148.178
February	86.649	93.252	151.870	169 295	167,018
March	93,245	111,474	165,372	184,945	173.952
April	95,562	112,053	168,745	186,323	176,707
May	99,436	116,911	169,773	194,580	195,008
June	103,252	122,907	168 162	20-,941	193,640
July	101,279	126,169	167,953	199 453	203,873
August	102.322	136,089	174,977	203,573	213,418
September	107,852	129,585	176,707	194,764	202,561
October	112,167	136,682	178,378	192.652	199,889
November	106,795	138,610	175,304	195,218	201,143
December	117,748	146,257	182,104	178,428	204,970
Total	1,210,887	1,478,473	2,024,159	2,277.635	2,280,357
Total fine ozs.	988,067	1,206,434	1,651,247	1,858,650	1,860,771

The production of the districts outside the Witwatersrand, estimating the month of December, rose to 280,000 crude ounces in 1896, making the total output of the Transvaal for the year 2,560,357 crude ounces, equivalent to 2,089,251 fine ounces, or $43,184,818 in value.

At the opening of the year the political troubles in the Transvaal had heavily reduced the production, which in January fell to about the point which it had reached at the close of 1893, or two years before. The effect of these troubles was more in the temporary disorganization of labor than in any actual damage to mines or closing of mills. Several months elapsed before there was a complete recovery. The production gradually increased, but still remained month by month below that for 1895 until July, when it showed a slight excess over that of August, 1895, which had previously been the month of greatest output. In September there was a further gain and the total reached 213,418 oz., but from that point it again fell slightly. The total for the year, however, is slightly in excess of that for 1895, the difference being only about 2,700 oz. The

slowness of the recovery in production has been very disappointing to investors in the Witwatersrand mines, who, in the previous year, had been led to expect a production reaching from $60,000,000 to $75,000,000 during the year just closed. Various causes have contributed to the present state of affairs. During part of the year there was great complaint about the difficulty of obtaining sufficient labor, and when this was removed there arose further trouble from short supply of water, so that throughout the year there has been some more or less well-founded cause for complaint. Certain legislation has been obtained from the Transvaal government, including the regulation of native labor and a partial prohibition of the sale of liquor at or near the mines, and an agitation is still in progress to obtain further concessions, prominent among which are reduction in railroad rates, reductions in tariff on imported supplies, and the doing away with certain monopoly, such as that for the manufacture and sale of dynamite. It has been insinuated that many of the complaints made, and perhaps some limitation of the production, has been for effect upon the government, and perhaps also to promote the purposes of certain operators on the London stock market. This is altogether possible, but the fact remains that, instead of an increase, the production of the Transvaal has remained practically stationary during the year just closed.

Not the most encouraging feature of the situation is that there has been a general decrease in the grade of the ore as shown by the results with the exception of a few prominent mines, such as the Robinson. Part of this is certainly due to the increase in milling capacity which has been going on for two or three years. To keep the new and larger mills going it has been necessary to use all the ore without sorting and selection, as has been done at many of the mines. At some of them low-grade ore which had previously been laid aside or had not been mined has been taken out and brought to the mills in order to keep them going. In any case it is clear that to utilize the mill capacity of the district, low-grade ores must be worked, and that a great majority of the companies will find the strictest economy and the best possible management necessary if they are to continue to pay dividends or even to meet expenses. How this reduction of expenses is to be carried out is a matter for the most careful consideration. In September the wages of native miners were cut down, but these wages are really only a small proportion of the total expenses, the pay of the white labor employed and the cost of supplies being items of a great deal more moment to the company.

Perhaps the most important event of the year was the decision of the High Court of the South African Republic holding the MacArthur–Forrest patents void, and thus removing the obligation to pay royalty on nearly one-third of the gold output.

In the districts outside of the Witwatersrand some progress has been made. The Sheba, which is the best-known mine, has made an excellent showing for the year, and in the Lydenburg and Potchefstroom districts there have been improvements. A moderate increase is shown in the total from these outside districts.

The Chartered Company's Territory.—The promise made of developments in Mashonaland and Matabeleland in 1896 has not been carried out. During a considerable part of the year work on the mines was almost entirely stopped owing to the Matabele revolt, and since that has come to an end the transportation difficulty has been more pronounced than ever. The extremely slow progress of the railroad to Salisbury, the central point in Mashonaland, has caused much indignation among those who have settled there or who have invested their money in companies operating there, but there seems to be no present remedy for the trouble. Actual production has been very small, while development work and prospecting have necessarily been limited.

Other Countries.—In the other African countries nothing new can be reported. Gold in small quantities is produced in Natal and in a part of the Cape Colony. North of the Chartered Company's territory, in the Zambesi country, some gold is obtained by the natives, but the supply is intermittent. In Western Africa, on the Gold Coast, regular mining is conducted, and the Wassau Company, an English corporation, has been steadily at work. The amount of gold obtained in Africa outside of the Transvaal, however, is not very large.

AUSTRALASIA.

Through the courtesy of the Mines Departments in the several colonies, we are enabled to present a very close approximation to the gold output for the year 1896, comparison being made with the complete figures for 1895 as given in *The Mineral Industry*, Vol. IV. The production reported is as follows, the crude ounces having been reduced to fine ounces:

	1895.			1896.		
	Reported ounces.	Fine ounces.	Value.	Reported ounces.	Fine ounces.	Value.
New South Wales....	36,165	315,144	$6,514,026	320,450	280,394	$5,795,744
New Zealand.....	295,491	264 142	5,459,815	305,000	274,509	5,673,915
Queensland.....	623,009	513,975	10,623,863	624,992	515,618	10,657,824
South Australia.....	47,343	43,792	905,181	46,000	42,550	879,509
Tasmania.....	54,964	48,918	1,011.135	62,353	54,085	1,117.943
Victoria.....	740,086	695,681	14,379,726	782,016	735,095	15,204,414
Western Australia...	231,518	188,633	3,900,078	260,000	211,900	4,379,973
Total.....	2,350,557	2,070,335	$42,793,824	2,400,811	2,114,142	$43,709,322

New South Wales.—The fluctuations of gold production in this colony have been very great, as is shown by the following table giving the output in crude or reported ounces for nine years past:

1888	87,503	1891.....	153,336	1894.....	324,787
1889.....	119,759	1892.....	156,870	1895.....	360,165
1890.....	127,760	1893.....	179,288	1896.....	320,450

In 1888 the gold output had reached its lowest point in the reaction which followed the first rush. In the years from 1889 to 1893, inclusive, the increase was comparatively slow, though the total in 1893 was more than twice that of 1888. The bank panic of 1892 was felt very severely in this colony, and sent a large number of men—a considerable proportion being old miners—back to the gold-fields, and an increase of 80%, almost all from alluvial gold, followed in 1894. In the next year there was again an increase, though naturally very much less in amount than the previous year had developed. In 1896 the production fell to about the figures of 1894; the decrease as compared with the previous year being 39,715 oz., or 11·1%. Notwithstanding this reduction the gold reported was more than twice that turned out in 1892 and nearly four times that of 1888.

The old mines of New South Wales have, as a rule, continued to work steadily through the year, and as a rule with fair results. The variation has been chiefly in placer mining, and has depended largely on the industrial conditions which served to increase or diminish the number of miners. Last year's falling off must also be attributed in part to the smaller number of alluvial deposits discovered and opened, and to the partial working out of some of those opened in the previous year.

The recent extension of the railroad line from Sydney into the Cobar District, where copper mines have long been worked, has stimulated prospecting in that section, and indications have been discovered of gold-bearing reefs, which it is expected will lead shortly to development work and to the establishment of a new gold-bearing district. The copper mines of the district are also extending their workings.

New South Wales is the great silver producer among the Australasian colonies, and the mines of the Broken Hill District have continued to be worked. The Broken Hill Proprietary Company, the leading company of the region, is passing through a period of transition, the works being gradually changed so as to enable the company to utilize the large bodies of low-grade sulphide ores which it possesses, but which up to a year or two ago had been neglected, since a sufficient supply of the more easily worked oxidized ores could be obtained. The total yield for the year has been about 8,600,000 oz. of silver and 24,000 tons of lead. The output from the remaining mines will bring the total silver product of Australia up to about 19,000,000 oz.

New Zealand.—The marked increase shown in the New Zealand gold production in 1895 as compared with 1894 was not altogether maintained, although a moderate growth was shown in 1896, when the production reached 305,000 crude ounces, a gain of 11,509 oz., or about 3·7%. This is not surprising when it is considered that the work of 1896 in New Zealand has been chiefly in the way of development and the opening of new mines. Moreover, some of the older mines which showed very high returns in the previous year have fallen off somewhat in the grade of the ore as the workings have been extended. The result is not at all discouraging, but is only what was to be expected. Several of the mines which are in full operation have shown excellent results; the Hauraki, the Waitekauri and some other well-known mines may be included in this list. A large amount of capital has gone into the New Zealand mines, but for the most part it seems to have been placed more judiciously than in some other colonies, and with prospects of a fair return. The most notable feature in New Zealand is in the application of the cyanide and other leaching processes for the treatment of the ores, so far with a fair degree of success.

Queensland.—This colony has maintained its output of 1895, and shows a small increase, amounting to about 3%. The production is maintained by a number of old and well-established gold fields where quartz-mining has been carried on through a series of years. The proportion of alluvial gold is less than in New South Wales, or, in fact, than in any of the other colonies. For the three-quarters of the year ending with September 30th the total gold obtained from placer workings was only about 20,000 oz., or 4·5% of the total. The most prominent gold fields in Queensland continue to be those of Charter Towers, Crocodile Creek, Croydon and Gympie, while the Mount Morgan continues the most productive mine. The development of deep mining in Queensland continues, and with excellent results. The working of old tailings by leaching continues to be a feature in several districts, notably in the Charters Towers and the Croydon districts. In the latter the amount of gold obtained from the tailings reached nearly 40% of the total.

South Australia.—In this colony gold mining has been about stationary, but little new development being shown, while the total output shows a small decrease. This has been due to several causes, chief among which has been the drain of miners to Western Australia, where higher wages and the prospects of extraordinary gains have taken many men. Arrangements are in progress for working on an extensive scale the mines of the Northern Territory, which is under the jurisdiction of South Australia. Some mines have already been opened in the extreme northern portion of this district adjoining Torrens Straits, and it is not unlikely that further exploration will be undertaken, and that the next few years may show a good deal of prospecting in the territory which is now almost unknown. If the difficulties incident to extreme heat and lack of water can be overcome there is little doubt that a great deal of work will be undertaken.

Tasmania.—The island colony shows a considerable increase, greater in proportion than any of the other colonies. The working of its mines has continued steadily and successfully, and there is every prospect of a continued gain in the production.

The Mount Lyell copper and silver mines, on which a good deal of preparatory work has been done, were finally opened during the year and their smelting furnaces started up. The result so far has been encouraging, and there is no doubt that in the future Tasmania will be a considerable silver producer, and that copper will be added to tin as an important part of its metallic output.

Victoria.—This colony shows the substantial increase of 41,930 oz. of gold, and continues to lead all the other Australasian colonies, its production amounting to over one-third of the total. The old mining districts continue to produce well as the mines increase in depth. While few new mines were opened in 1896, there has been a great deal of prospecting carried on, chiefly in the mountainous districts of the Australian Alps, which have long been believed to be rich in gold deposits.

Western Australia.—This colony continues to be a disappointment. While an increase of about 13% in the gold production is noted in 1896 as compared with 1895, this gain is not by any means proportionate to the amount of capital which has been invested in the mines, nor does it begin to approach the degree of progress which had been expected. It is more than ever evident that the Western Australia mines have been over-rated and very heavily over-capitalized, and that the results are far below what should have been secured from the expenditure made upon them. The phenomenal yield of a few rich pockets in the Coolgardie and Murchison districts have not been sustained, and some of the mines which yielded at first what seemed to be almost fabulous results have fallen to a very low point. Bayley's Reward, the mine which first drew attention to the Coolgardie, is a most striking instance of this. The operation of the mines continues to be attended with many difficulties. The railroad built by the colony has been completed to the Coolgardie

District, considerably simplifying the question of obtaining machinery and supplies. Lack of water is still, however, a great drawback to the exploitation of the mines, and although the Colonial government has undertaken the work of obtaining a water supply, it is evident that many months must elapse and an enormous amount of money must be expended before milling operations on a large scale are possible. In the meantime, however, some valuable mines have been developed, such as the Great Boulder and a few others, which promise at present good results.

THE COURSE OF THE IRON MARKETS IN 1896.

The year 1896 was an eventful one throughout for the iron market in the United States, and there have been but few in its history—if we except the panic years of 1873 and 1893—which have shown such important changes and fluctuations. While production remained at a comparatively high level for a considerable part of the year it exceeded the demand sufficiently to weaken prices and to leave the market generally in a most unsatisfactory condition. Furthermore, there has been no year on record in which pools and combinations have had so strongly marked and unfavorable an effect as during the period just closed.

Production of Iron Ore.—The consumption of iron ore in the United States in the manufacture of pig iron may be estimated for 1896 at 17,700,000 short tons (of 2,000 lbs.). The imports of iron ore, chiefly from Spain, amounted to 706,000 short tons, leaving the domestic product consumed approximately 17,000,000 tons. Of this quantity 11,143,000 short tons, or no less than 63%, formed the supply drawn from the Lake Superior mines, which have continued, as in previous years, and even to a greater extent than ever before, to be the most important element in the iron ore supply. The imports amounted to 4% of the total supply, leaving only 33%, or a little less than one-third of the total, to be drawn from the Eastern and Southern mines. In all of these, however, the demand in the earlier part of the year was sufficient to cause considerable activity. In the iron ore mines of Eastern Pennsylvania, of the Lake Champlain and Hudson River districts of New York, and even in the old region of Western Massachusetts and Connecticut, the iron mines were generally at work, and in some cases exploitations which had been idle for years were reopened and extended. In the Alabama mines there was but little change, the working of the ore deposits continuing steadily throughout the year.

The imports of iron ore were chiefly from Spain, although a few cargoes came from Algeria and a few from Greece. Most of these imports were on contracts made during the last quarter of 1895, when nearly all the Eastern anthracite furnaces were at work, and there seemed a probability of a very heavy demand for iron continuing throughout the year. Toward the latter part of the year the filling of contracts and the gradual decrease in pig iron production, which prevented additional orders, caused a falling off in imports, and during the last four months of the year they were very light. The Cuban mines furnished a somewhat irregular supply through the year, owing to the troubles in that island and to the impression that the supply could not be relied upon. No new sources of foreign supply were developed.

The tables below show the shipments of iron ore from the Lake Superior region during the season of navigation, and are in effect a complete statement, the only portion estimated being the comparatively very small amount of rail shipments made after the close of navigation. The second table gives the receipts of iron ore at Lake Erie ports, to which the greater part of the output—practically all except the relatively small amount which goes to the furnaces in and near Chicago—goes, and also the stocks on the docks at Lake Erie ports at the close of the season. The latter includes only the amount on the docks for sale or contract delivery, and does not include stocks at the Cleveland and Buffalo furnaces,

SHIPMENTS OF LAKE SUPERIOR IRON ORE BY PORTS FOR FIVE YEARS.

Year.	Marquette.	Escanaba.	Gladstone.	Ashland	Two Harbors	Duluth and Superior	Total. Lake.	Total. Rail.	Totals.
1892.....	1,026,338	4,010,085	115,886	2,223,683	1,165,076	4,245	8,545,313	528,930	9,074,243
1893.....	1,086,934	2,048,981	203,585	1,117,524	903,329	520,565	5,880,918	178,037	6,058,955
1894.....	1,424,409	1,657,240	79,109	1,731,703	1,373,344	1,367,286	7,633,091	115,841	7,748,932
1895.....	1,079,485	2,860,172	109,211	2,350,219	2,119,156	1,716,667	10,234,910	194,127	10,429,037
1896.....	1,578,600	2,321,928	220,888	1,566,336	1,813,992	2,156,177	9,657,921	290,000	9,947,921

SHIPMENTS OF LAKE SUPERIOR IRON ORE BY RANGES FOR FIVE YEARS.

Year.	Marquette.	Menominee	Gogebic.	Vermilion.	Mesabi.	Totals.
1892.....	2,666,856	2,261,499	2,973,998	1,167,650	4,345	9,074,343
1893.....	1,829,053	1,466,197	1,329,464	820,621	613,620	6,058,955
1894.....	2,058,683	1,139,273	1,810,290	948,514	1,792,172	7,748,932
1895.....	2,097,838	1,923,798	2,547,976	1,077,838	2,781,587	10,429,037
1896.....	2,563,051	1,625,745	1,788,956	1,088,090	2,882,079	9,947,921
Totals from opening of mines.....	11,215,481	8,416,512	10,450,679	5,102,713	8,073,703	43,259,088

RECEIPTS OF IRON ORE AT LAKE ERIE PORTS, 1895 AND 1896.

Port.	1895. Receipts.	1895. Stock Dec. 1.	1896. Receipts.	1896. Stock Dec. 1.
Toledo.....	260,730	113,132	301,794	115,959
Sandusky.....	12,361	34,375	58,667	59,491
Huron.....	146,442	101,000	226,515	200,075
Lorain.....	214,219	224,264	191,445	231,288
Cleveland.....	2,312,370	1,200,792	2,313,170	1,419,311
Fairport.....	914,617	605,470	941,446	773,905
Ashtabula.....	2,474,791	1,301,302	2,272,822	1,441,666
Conneaut.....	244,967	292,460	327,623	275,800
Erie.....	811,989	335,718	847,849	355,222
Buffalo and Tonawanda.....	719,742	207,199	545,101	82,267
Totals.....	8,112,228	4,415,712	8,026,432	4,954,984

It will be seen from these figures that the total output for the year showed a comparatively small decrease from that of the previous year, and exceeded the amount shipped in any year preceding 1895. The actual decrease from 1895 was 481,116 tons, but the increase over 1894 was 2,199,698 tons, and over the 1893 shipments it was 3,888,966 tons, or more than 60%. There was even an increase of nearly 10% over the large shipments of 1892.

The amount of stocks shown on the Lake Erie docks at the close of the season does not express entirely ore unsold, since a considerable quantity included in the stocks is ore contracted for delivery and simply held because the furnaces have not room or are not ready to receive it. For this reason it is difficult to ascertain with exactness how much of the ore shipped has gone into consumption, as it would be necessary to find the stock held at all the furnaces, using that class of ore, a work which is practically impossible. It must be remembered that early in the present year the large demand for ores through the winter practically cleared the receiving docks by spring, and there have been very few years in which it has happened that so small an amount remained on the dock at the opening of navigation as in 1896. For two or three months after shipments began nearly all the ore arriving passed over the docks at once, and it was near the end of June before any of it began to be stored.

The division of the shipments by ranges as given in the table shows that the Mesabi Range, the newest part of the region, has maintained the prominence which it had acquired within a comparatively short time. The decrease as compared with 1895 was chiefly in the Menominee and the Gogebic Ranges. The Vermilion Range, in Minnesota, about held its own, while the Marquette Range, including some of the oldest mines in the region, shows a considerable increase. The Mesabi mines gained about 100,000 tons on the output of 1895. On the last named range a good deal of exploration was carried on and some important new developments were made, but the shipments came chiefly from the mines already opened. This resulted from the fact that the range is now almost entirely under the control of the Lake Superior Consolidated Mines and of the Minnesota Iron Company. These two interests have worked together and regulated production to suit their own views. The developments made are for the future, and the new mines are held in reserve until their output is needed to supply the market.

Just at the close of the year a very important deal was announced by which the Lake Superior Consolidated Mines transferred their principal shipping properties, the Mountain Iron and the Rathbun, to the Carnegie Steel Company under a 50-year lease. The Lake Superior Consolidated, generally known as the Rockefeller interest, had in previous years acquired very extensive properties on the Mesabi Range, but under the new deal it is apparently its intention to withdraw from the mining of ore, and to leave that part of the business in the hands of the leasing company. During the past two years it has built up a very large fleet of ore carriers on the lakes, but under the new arrangement it is understood that these will be at the service of the Carnegie Company at fixed rates, sufficient to return the owners an interest on their investment. The Carnegie Company will therefore have the advantage of securing its supplies of ore at the cost of mining and transportation, and will be entirely independent of whatever price for ores to outside buyers may be fixed.

There have been practically no fluctuations in the prices of Lake Superior ores throughout the season. In April a combination was made by the producers under the lead of the two companies already named, the Lake Superior Consolidated Mines and the Minnesota Iron Company. The basis of the price was $4 per ton for standard Bessemer, Norrie, the well-known Gogebic mine, being taken as the standard. This was an advance of $1.10 over the contract price for the season of 1895, although during the boom of August and September the price for furnaces which had not made season contracts had been run up as high as $4 or even above. On this basis the price for hard ores of the highest quality, such as Minnesota, from the Vermilion Range, was as high as $4.25. Franklin and Biwabik were rated at $3.65, while the higher phosphorus ores of the Mesabi were fixed at $3.35. These quotations remain fairly steady throughout the season, no break whatever having occurred, so that the range of prices at Lake ports for the year may be given as follows: Special hard specular ores, $4.50; standard Bessemer hematites, $4 to $4.25; standard hard hematites, Non-Bessemer, $3.50 to $3.75; soft hematites, Non-Bessemer, $2.50 to $3.25.

The changes of the season were chiefly in the freights paid to Lake vessels on ores. Early in the season the range was comparatively high, but a large supply of tonnage and the prospects of a falling off in shipments caused a break from $1, the opening rate, to 85c. and even to 70c. A subsequent recovery to 95c. from Duluth to Lake Erie was followed in July by a heavy fall and a number of cargoes were taken from Duluth as low as 60c. per ton, while 55c. from Marquette and 45c. from Escanaba was the rule. As the season advanced, however, an extraordinary demand for grain tonnage sprang up, which counteracted other influences, and for the later cargoes much higher prices were obtained by the vesselmen. These varying rates, however, probably affected the cost of ore delivered at the lower ports much less than in previous years, since a very large proportion of the shipments is now made in vessels owned by the shipping companies. It is partly due to this that the break in outside rates occurred, and the "wild rates," as they are called, accepted by carriers not under contract, really represent but a small proportion of the tonnage.

While the shipments of ore from the individual mines have not yet been fully made up, it may be noted that the heaviest output reported for the year was from the Oliver, on the Mesabi Range, 808,000 tons. The Cleveland-Cliffs Iron Company, on the Menominee, was second, sending out 520,000 tons. The Chapin shipped 421,000 and the Chandler 472,000 tons. The Norrie was comparatively a light shipper, part of its property having been closed down, and records only 375,000 tons. While these figures are approximate, they are probably correct within 2,000 or 3,000 tons. Of the total shipments 5,000,000 tons, or a little over one-half, were standard Bessemers, an unexpectedly large proportion of non-Bessemer having been taken. It must be remembered, however, that a considerable proportion of these approach the Bessemer standard very nearly.

The conditions of the iron market during the year prevented any increase in the area to which the Lake ores are supplied, and these were

aided by the maintenance of high prices. They continue to be the main reliance of the furnaces of Illinois, Ohio and Western Pennsylvania, but only a small proportion of these ores comes east of Pittsburg, the Eastern furnaces continuing to rely upon local iron ores with a certain mixture of imported Spanish or Cuban ores, and the Southern furnaces still depend upon their local supplies entirely.

Pig Iron Production.—The year opened with the blast furnaces generally running at the high rate which they had reached during the boom of the latter half of 1895. At the close of that year we recorded 244 furnaces in blast with an approximate capacity of about 1,000,000 tons a month. The reaction in demand and consequently in prices had already begun when January opened. Nevertheless, demand still continued large and the average for January was 240 furnaces, with a weekly capacity of 221,800 tons. In February there was a considerable contraction, the number of furnaces in blast falling to 215 with a weekly capacity of 207,000 tons. For several months following, however, there was but little change, the output in March being practically the same as for February, when allowance is made for the three additional days in the month. April again showed small variation, but in May the number of furnaces fell to 195 with a weekly capacity of 199,600 tons. In June producers had begun to realize the uselessness of fighting against a falling market, and there was a further reduction, a number of furnaces going out of blast. In July, however, the output was kept up much better than had been expected, but in August there was another fall which continued through September and October. The lowest point was reached in the last-named month, when there were only 131 furnaces active and their weekly capacity was 116,550 tons, which was the lowest point recorded since the break after the panic of June, 1893. November recorded a slight recovery, many changes in furnaces having been made, and although the actual number in blast was not largely increased the capacity rose to 127,250 tons. The total production as given in our tables

PIG IRON PRODUCTION IN THE UNITED STATES.

Month.	1894.		1895.		1896.	
	Furnaces.	Production.	Furnaces.	Production.	Furnaces	Production
	Number.	Tons.	Number.	Tons.	Number.	Tons.
January	137	447,723	185	762,474	240	945,900
February	128	406,443	181	641,550	215	800,022
March	134	515,137	172	688,170	207	882,181
April	144	571,784	171	666,315	196	835,116
May	124	472,893	175	664,600	195	821,923
June	91	304,003	172	664,449	195	691,094
First half-year		2,717,983		4,087,558		4,976,236
July	109	411,500	187	730,156	192	826,593
August	136	539,540	203	780,855	170	645,200
September	169	694,974	219	899,400	149	663,256
October	172	717,691	228	940,630	131	466,200
November	186	761,251	238	979,933	133	509,000
December	188	814,449	244	1,027,776	148	682,390
Second half-year		3,939,405		5,358,750		3,792,633
Totals for year		6,657,388		9,446,308		8,768,869

Fuel Used.	1894—Tons.	1895—Tons.	1896—Tons.
Anthracite	914,742	1,270,899	1,170,615
Coke	5,520,224	7,950,068	7,300,639
Charcoal	222,422	225,341	297,615
Totals	6,657,388	9,446,308	8,768,869

therefore shows a decrease from that of 1895 of 677,131 tons, or about 7%. It should be remembered that the weekly capacity of the furnaces as given in the tables does not always express the exact production, the furnaces being sometimes run at higher pressure than at others, and it can therefore be considered only an approximation from week to week. The total output, however, as given is very close to the exact figures which will be obtained when all the accounts for the year are made up. The production is given in the accompanying tables by months, and also according to fuel used.

The official figures for the first half of 1896 showed that of the total production of pig iron in the six months ending June 30th 56% was classed as Bessemer pig. As the activity of the steel business continued unabated during the second half of the year the probability is that this percentage was at least maintained if not increased, and that of the total output of iron for the year between 57 and 60% was Bessemer metal. To this must be added the iron used in the manufacture of basic steel, which would bring the proportion of iron absorbed by the steel makers up to about ⅔ of the total production.

Course of the Iron Markets.—Something of the general course of the markets is indicated by that of the production of the raw material. We find that at the opening of the year there had been some recovery from the reaction which, toward the close of 1895 had, set in from the activity caused by the December boom, and which had been accentuated by the scare which followed the issue of the President's Venezuelan message in December. During the month of January this recovery was generally well maintained, and was supported by the success of the bond issue, which replenished the gold reserve. In the second half of February, however, there was a halt in the market, and for several weeks it remained in a somewhat dull condition, and throughout the month of March sales began to decrease in amount, and the markets were in the state generally described as waiting or expectant. Not much weakness was developed, however, until April was reached, when orders began to fall off and the markets gradually weakened. At the opening of April a considerable excitement was caused by the meeting of the steel producers, and the preliminary arrangements for the formation of the pool, which later crystalized into shape and took the form with which we have since been so familiar. This pool included practically all the makers of Bessemer steel billets in the country, whether their billets as made were used up in finished material in the makers' own mills or were sold to the smaller mills in billet form. This pool at once adopted the policy of steadying the market by fixing a high price, the rate being established at $20.25 per ton at Pittsburg, and a penalty being imposed on all sales made below the established rate. The immediate effect of this organization was to stir up the opposition of the various interests affected, including chiefly the wiremen and the tinplate manufacturers, whose business would be very seriously affected by the increase in price. This increase did not take place at once, however, as there were in existence a number of contracts for billets at a lower price which were still unfilled, and as there was a considerable stock of steel in the hands of brokers and middlemen, so that the combination price could not fully take effect until these supplies were worked off. Practically the result was that, until August, or in fact almost the first of September, the sales of billets at the pool price were exceedingly small

The continued high rate of production of pig iron, combined with the decrease in demand, had an injurious effect upon the market and while a strong effort was made by those concerned to keep up prices there was a gradual cutting and shading which reduced the actual selling prices. The reduction of output in June and the following month checked this to some degree, but prices both for foundry and Bessemer pig continued to be somewhat irregular, and a pressure to sell began to be evident in most of the markets. In July certain Philadelphia representatives of the blast furnaces made an effort to effect a combination of the furnacemen, but two or three preliminary conferences made it very clear that there were too many interests to be harmonized to offer any prospect of success, and the matter was afterward dropped.

As the year advanced, also, the coming election began to be a factor in the market. It is an old saying that election year is always a dull year in the iron trade, but in 1896 this was emphasized by the fact that the issue of the election as made up involved the whole monetary policy of the country, and consequently affected trade in a peculiar way. After the national conventions had been held the iron markets settled down into a dull condition; no one felt confident as to the future; no one was disposed to enter into any new enterprise or to accumulate stocks of finished material. Buying of raw material was done simply to meet immediate necessities, and prices were determined rather by the necessities of the seller than those of the buyer. The steel pool held several meetings in August and September, but did nothing beyond resolving to maintain the prices at which it is already manifest that little or no business could be transacted. The reduction in pig iron output did not stimulate prices, as it was evident that it had not been made on the same scale as the decline in consumption, and that there was still a surplus of output beyond the immediate need of the market. A little spurt was caused in September by the letting of some contracts by the Navy Department, but it effected only a few makers of plates, beams and similar material.

As election time approached the iron market was more and more dull and depressed, and it was still more evident that business had been limited to immediate necessities. A few orders for rails for export were the subject of considerable interest, but were not sufficient in amount really to affect the trade. The fact that they had been taken at prices variously estimated at $6 to $8 per ton below the price charged for rails for home delivery caused a great deal of comment. Meantime the furnacemen began to complain in no uncertain tones of the high prices maintained for ore and coke, which continued at the rates fixed in the spring without any regard to the falling prices and lower demand for pig iron. The furnace operators certainly had a difficult time of it, and were not by any means to be envied.

As election approached and the conviction grew stronger of the probabilities of success of the anti-silver party, a little more confidence was expressed, and while this did not cause much increase in actual commercial sales, it gave rise to a considerable number of speculative purchases, and a good many thousand tons, both of foundry iron and Bessemer pig were bought by parties who intended to hold the iron for a rise. This helped to give steadiness to the pig iron market, and to stop the shading of prices, and in so far had a favorable effect. The actual result of the election in November was felt at once in the iron market, and for a week or two it seemed almost as if another boom was coming. The excitement quickly subsided, however, and while there was a real improvement in business, it was manifested rather in the confirming of contracts already made, and in a willingness to close contracts for 1897 rather than in the immediate volume of sales. The realization of the fact that the election was but one step forward and that a long and tedious work remained to be done before the country could be put upon a sound financial basis, with still some uncertainty as to the final result, checked improvement and made the feeling still one of doubt as to the future.

During the closing months of the year the iron markets were affected principally by the course of the different pools and combinations. The most important of these, of course, was the steel billet pool, to which reference has already been made. As was said above, the old contracts and the stock in the hands of middlemen at the time the pool began operations practically prevented its prices from becoming operative for several months after its first organization. When these contracts and stocks were exhausted, business had fallen into a very dull condition, and the demand for finished material was so light that buyers of billets did not feel disposed to pay the pool prices, and preferred for the most part to shut down their works rather than to accumulate goods which they must sell at a loss, if at all. In this condition of affairs the trade was enabled to realize fully the great advantage which the pool gave to those steel-makers who owned their own mills and put their raw material into finished form in their own works. A meeting held, nominally to reorganize the pool, did little beyond including in it the open-hearth billets which had heretofore not been considered, and the price of open-hearth steel was fixed at $2 per ton above that of Bessemer—an action which was deprecated as injudicious by many of the owners of Bessemer steel works. If rumors are to be believed the dull condition of business and the anxiety for work were two great temptations for certain members of the pool, and charges were very freely made to the effect that some of them had violated the agreement and were selling at prices before that fixed by the combination. While no evidence has been furnished to prove these charges, there seems to have been some foundation for them. A meeting was held in December to settle the

troubles, which was of a stormy nature, but which ended in the extraordinary announcement that the pool had been fully maintained, but that members were left entirely free with regard to prices. This action, which to many seemed like a practical dissolution of the combination, was followed by a general break in quotations. Heavy sales were made chiefly for future deliveries, and the price fell from the pool rate of $21.25 per ton at Pittsburg to $19, $18, $17, and even to $15.50, at which price it is said a good many tons were contracted for.

It is understood that many Eastern mills have covered their probable requirements for the first half of 1897, at prices ranging from $17 to $18.50 at tide water. This fact renders impossible the reinstatement of pool prices until 1897 shall be well advanced, although it is announced in the closing week of the year that an effort will be made to put the pool again upon a substantial footing.

Following the break-up of the pool—and perhaps partly explaining it—announcement was made of the deal between the Carnegie Steel Company and the Rockefeller iron ore interests, to which reference has been made above. The situation in the steel market is now practically that the Cernegie Company controls its own supply of ore; controls at a fixed rate all the Lake transportation which it needs; has well advanced toward completion a railroad line of its own from the nearest Lake port to its Pittsburg mills, on which the cost of transportation will be reduced to a minimum, and finally, through its auxiliary, the H. C. Frick Company, controls the greater part of the output of the Connellsville coke region. With its enormous plant, to which all the latest improvements and economies have been added, and with its raw materials practically furnished at bare cost, this company is not only in a position to make steel cheaper than any other producer; it is so situated as to be absolutely in control of the market, and make the prices of steel what it will. We have had pools and combinations without number in the iron market in this country, but never before a position like this, in which a single company could absolutely dominate the trade, and make any combination which can be formed simply the register of its own wishes. The situation is not altogether a comfortable one, and many are looking anxiously for the result.

To go back a little in the order of time and to take up another pool which has made considerable stir, we find that the nail pool which controlled the output at first of steel wire nails and afterward of cut nails also, commenced to develop trouble during the dull months of the later summer. This pool, which had been in existence over two years and had been very thoroughly organized in the beginning, has occupied a good deal of space in the public attention from the beginning, since no other pool which had been, or possibly could be, organized in the iron trade, came into such close and immediate relations with the public. The nail trade deals directly with the retail hardware trade which goes into every village in the country, and it deals in an article of universal consumption and necessity in which any change in prices is felt by men of almost every business and every condition in life. This pool, taking hold of the market at a time when it was demoralized by excessive competition, succeeded in more than doubling the wholesale selling price of both wire and cut nails. Throughout the greater part of the year that price has been maintained on the basis of $2.55 per keg for carload lots in Pittsburg for wire nails and $2.40 per keg for carload lots in Pittsburg for cut nails. In a time of general reduction of prices the hardware trade resented the maintenance of these high rates, but for the most part their protests were unavailing. The managers of the pool had accumulated a large fund, which was used to buy off competition and to induce the few manufacturers who remained outside the association to retire from business, either by buying their works outright or by paying them a subsidy. As this course rather encouraged the industry of starting opposition works, the association had added to it a regular system of boycotting, intended to prevent the manufacturers of nail machines from selling them to anyone not in the pool. This was somewhat dangerous ground, however, and a test case made up in Indiana was decided in a very emphatic way by the United States Circuit Court, which held any contract in restraint of business of this kind to be against public policy and consequently void. Moreover, business began to fall to a very low point, retailers generally buying only what they were absolutely forced to, and a powerful public opinion being brought to bear upon the pool methods, which were widely published and commented upon. Moreover, the tax upon manufacturers for maintaining the pool and buying off outsiders grew to be onerous, and many makers began to realize that it amounted to almost as much as the increase in the price of nails, and that they were simply incurring public odium and opposition without obtaining any corresponding money profit. Under these circumstances it is not surprising that a meeting was called early in December at which it was formally voted to disband the pool and to leave the trade free to open competition. The immediate result of this action was a drop in prices from $2.55 for wire nails and $2.40 for cut nails to somewhere about $1.40 and $1.25 respectively; and although natural conditions have induced a slight reaction from the lowest point the year closes with nails selling on the basis of $1.50 to $1.55 at mill for wire and $1.35 to $1.45 at mill for cut nails. Another curious result has been the cancelling of a number of orders for nail machines which had been placed with the manufacturers by parties who intended to go into the business in order to secure a subsidy from the pool; thus showing that its dissolution has put an end to a profitable, if hardly a legitimate, branch of industry.

The steel rail pool, which is composed of a few large concerns and is of a more stable character than any of the others, maintained the price of steel rails standard sections at $28 per ton at mill throughout the year. We have already mentioned the taking of several orders, amounting in all to 45,000 to 50,000 tons for export, principally to Japan, at a much lower price, but the unfavorable comment does not seem to have affected the pool at all. In December a meeting was held at which it was resolved to put the price of rails at $25 per ton at mill for 1897, a reduction of $3 per ton. Railroad men are not inclined to accept this gratefully, however, and the opinion has been very freely expressed that in view of the present prices of raw materials and the conditions of trade $22 per ton would be a sufficient price. It is, moreover, the opinion that at $22 a much larger business would accrue to the company.

The demand for rails has been light throughout the year; the unfavorable conditions of business have forced the railroad companies to keep their expenditures down to as low a point as possible. Repairs have been postponed wherever possible. The steel rails laid years ago to replace iron are now showing their wearing qualities, and in many cases it is possible to continue a steel rail in use for another year or two in a way which could not have been permitted when iron rails were in common use. The mileage of new railroads built during 1896 has been light. Conditions have not favored new enterprises, and the older companies have not felt able to make any great extension of their branches or subsidiary lines. The estimates of the *Railway Age* of Chicago and the *Railroad Gazette* of New York, the two principal authorities on this point, put the total new mileage for 1896 at about 1,800 miles only, the lowest report made for a number of years. The building of electric railroads has also been very unfavorably affected by financial conditions. Many new enterprises are projected, but very few comparatively have reached the stage of actual construction. The difficulty of securing money and high prices of rails have combined to check new construction, and the results are seen in the diminished sales of material.

Exports of Iron and Steel.—Exports of rails have been already referred to. The conditions prevailing here, the possibilities of cheap production which have been developed in this country, combined with the great activity of trade abroad and the demand for iron, have lead to the somewhat unusual condition of considerable exports of pig iron to England. Some of our Alabama furnacemen found that their iron could be sold in Liverpool at about 38s. per ton. At this price they could net at furnace almost if not quite as much as they were obtaining in the Northern markets, and advantage was accordingly taken of the opportunity. The statements of the Treasury Department for November and December, during which most of these exports weremade yet are not available, but it is understood that 40,000 tons at least, chiefly of No. 2 foundry with some forge iron, have gone abroad to Great Britain, while smaller orders have been booked for Italy and other European countries. Efforts are being made by the Tennessee Coal and Iron Company to develop this trade with the hope of making it a permanent feature in the Southern iron business. Whether more than a temporary success can be secured remains to be seen.

For the ten months ending October 30th the Treasury report shows a considerable increase in the exports of iron and steel and their manufactures, the total value reported in 1896 having been $38,957,645, against $28,149,031 for the corresponding period in 1895. The increase this year has therefore been $10,8 8,614, or about 15·5%. The largest increases included in this sum were in wire, castings, hardware and locomotives.

Prices of Coke.—The price of Connellsville coke was maintained throughout the year at $2 per ton per furnace. There was talk at one time of a further increase, but conditions did not favor it, the comparatively light demand and the competition of West Virginia coke being sufficient to check the proposed movement. Most furnacemen have found the combination of $2 coke with $4 Lake ore quite as much as they were able, and a good deal more than they were willing to carry.

Improvements in Iron and Steel Manufacture.—The year has not been an especially favorable one to the adoption of improvements or to experiments in the way of improvements, and but few changes can be reported. The great blast furnaces of the Carnegie Steel Company, the largest ever built, are now in operation, but no statements have yet been published as to the results obtained with them, and the economy realized by working on so large a scale is as yet uncertain. In steel manufacture the tendency to the development of the open-hearth process continues. The number of open-hearth furnaces in operation has increased during the year, and more new furnaces will shortly be ready to start up. A considerable proportion of these are basic furnaces, and the basic open-hearth process has been so far developed as to create a steady demand for basic pig iron, which is now regularly quoted in the markets. It has also operated to increase the demand for heavy steel scrap, which is used in this process. The Troy Steel and Iron Company during the year, started up its basic Bessemer converters, which have been running successfully on pig iron made from Lake Champlain ores, and have been turning out steel of excellent quality. This is the first use of the basic Bessemer process in this country, where the open-hearth process has found much more favor in dealing with iron high in phosphorus. With the revival of business a still further development may be expected.

Little or no advance has been made in steel making at the South, although it is stated that the manufacture of basic steel on a large scale from Alabama pig iron will shortly be undertaken.

General Summary.—The fact that the large production of pig iron has generally been absorbed and thus the year closes with unsold stocks very little larger than they were at its commencement, emphasizes the fact to which we have often heretofore referred, that the margin between a dull and an active year is much narrower than has generally been suspected. A comparatively small surplus production is quite sufficient to induce a fall in prices and to affect the markets unfavorably. That a year which could carry a consumption of raw iron only a few hundred thousand tons less than the most prosperous one on record should nevertheless be characterized universally as a year of dullness and depression is a remarkable fact, and leads us to believe that the dullness was due not so much to any actual decrease in demand as to the fact that the increase in demand was not proportionate to that in population and the general growth of the country.

As the year closes there are indications of improvement. Good crops and a heavy demand for grain for export are favorable features in the situation. In fact the only thing in the way of a complete return to prosperity seems to be the uncertainty still prevailing on the currency question, and if that can be settled there is no reason why we should not follow or join with Europe in the increased prosperity and volume of business which is reported from almost all civilized countries except our own.

THE CHICAGO IRON MARKET IN 1896.

The year 1896 was an unfavorable one in the iron trade at this center. Throughout the entire year there was displayed a great lack of confidence, and consequently business transacted was but little better, if any, than the preceding year. Low prices in all lines prevailed, and in some instances they were lower than ever before quoted. Competition was unusually sharp and therefore the consumer bought his material at

a price lower, probably, than he ever will find again. The buying throughout the entire year was almost entirely confined to quantities for temporary use, and but few contracts of any importance were closed. The year opened up with no increase in trade, and with prospects for a continuance of such conditions. The great mills of the Illinois Steel Company, at South Chicago, were closed down the entire month of January, and throughout the year this company was compelled to shut down a number of times, thus showing the bad industrial conditions.

In Pig Iron sales there was a slight increase in the latter part of January and in February business had become quite brisk. Some large buying of Southern iron was done chiefly by the car builders having bought heavily; it was estimated that more iron had been bought by this class of consumers during the month of February than the aggregate of the entire twelve months of 1895. Fully 40,000 tons of iron were placed in February through this market. Despite the increased business, prices fell off fully 50c. per ton over opening quotations. The months of March, April and May were fairly good in point of sales of pig iron, but the remaining months of the year, with the exception of a few weeks in November after election, business was very dull. Pig iron prices fluctuated greatly. Northern Foundry No. 2 opened the year at $14, and in October it reached the extremely low price of $11, recovering at the end of the year to $11.75. Southern No. 2 foundry iron opened at $12.85, and reached its lowest point, $10.85, in September, closing the year at $11.90.

Steel Rails were in very poor demand the entire year, the railroads having kept out of the market with great persistence. March and April were the best months of the year. Rail prices held at $29 per ton, Chicago delivery, the entire year.

In Billets and Rods business was poor most of the year, and it picked up in November and December only through the collapse of the nail trust. Billet prices fluctuated somewhat the first four months, the January price being $21.25; it fell to $19.50 in April but improved to $21.25 in June, where it stopped the rest of the year, in accordance with the orders of the billet pool.

In Bar Iron there was some increase in demand from the railroad and agricultural implement manufacturers, but buying by these concerns was still comparatively light, taking into consideration their usual demand. Some of the rolling mills closed entirely during the summer, while others simply ran on from one-third to one-half capacity. Through the influence of the Bar Iron Association the price of bars has been upheld most of the year, but for some reason prices fell off in December to 1·20c., the quotation from January to November being 1·35c.

In Structural Material the demand for bridge iron was larger than 1895, but in building shapes there was but little improvement. There has been considerable iron used in the erection of elevated roads, but contracts for such material were placed a couple of years ago. The building laws confining the height of buildings in Chicago to 12 stories have injured business. Prices in structural material fluctuated much and but little strength was noticed the entire year.

In Merchant Steel business improved but little over 1895. The principal buyers in this line are the agricultural implement, carriage and wagon builders. They were by no means up to their usual demand. Prices were maintained fairly well.

The following table shows the range of prices for iron in Chicago during the year:

MONTHLY RANGE OF IRON PRICES, CHICAGO, 1896.

	Pig Iron.			Steel Rails	Steel Billets.	Bars.	Beams.
	Lake Superior Charcoal.	Northern No. 2 Foundry.	Southern No. 2 Foundry.				
January	$15	$14.00	$12.85	$29	$21.25	1·30c.	1·80c.
February	15	13.50	12.35	29	19.50	1 30c.	1 70c.
March	14	12.75	12.60	29	20 00	1·35c.	1·65c.
April	14	12.50	11.85	29	19.50	1·25c.	1·70c.
May	14	12.00	11 85	29	21 25	1·35c.	1·70c.
June	14	12.00	11.85	29	21.25	1 35c.	1 80c.
July	14	11.75	11.85	29	21.25	1 35c.	1·80c.
August	14	11.75	11.85	29	21.25	1·35c.	1·80c.
September	14	11.50	10.85	29	21.25	1 35c.	1·75c.
October	14	11.25	10.90	29	21 25	1·35c.	1·75c.
November	14	11 25	11 10	29	21 25	1·30c.	1·75c.
December	14	11 75	11.90	29	21.25	1·20c.	1·65 c.

The fluctuations were less than might have been expected. The steadiness shown by the pooled products explains itself. In pig iron Lake Superior charcoal showed few changes, because there is a special demand for that grade for certain purposes.

THE CLEVELAND IRON MARKET IN 1896.

Iron Ore.—Notwithstanding the depression of business in the iron trade during the year 1896, the last season was a close second to the preceding year, when all former records of ore shipments were broken. The total Lake shipments of ore in 1896 were 9,657,921 gross tons, while those of 1895 were 10,233,910 tons. The rail shipments bring up the total for 1896 to 9,950,000, it is estimated. The receipts at the Lake Erie ports were 8,026,432 tons against 8,112,228 tons in 1895. There was on the docks at the Lake Erie ports at the close of the shipping season 4,954,984 gross tons, against 1,949,698 tons at the beginning of the season. These figures indicate that the shipments to the furnaces since May 1 have been 5,021,146 gross tons, against 6,339,496 gross tons for the corresponding period in 1895. During the season the receipts at the port of Cleveland were 2,313,170 gross tons, thus placing this port again in the lead as an ore receiving point, a distinction it lost to Ashtabula in 1888. The water shipments of the ranges were as follows for the year: Marquette, 1,473,051; Menominee, 1,515,745; Gogebic, 1,698,956; Vermilion, 1,088,090; Mesabi, 2,882,079 tons. The returns for the last two named were complete to December 1st, but there were some rail shipments from the other ranges later.

While the shipments of ore were heavy from Lake Superior, it was not a satisfactory season for the iron ore interests. When the season opened, it was calculated that 9,700,000 tons of Bessemer would be shipped, including some sold in the Mesabi range in 1895, but held over on account of the high lake freight rates. The lack of demand, consequent on a depressed business condition, made it necessary to cut the estimate down to 7,500,000 tons. A few months later it became apparent that there was not sufficient demand to warrant even that output. The sales of Bessemer were 5,000,000 tons, it is estimated, while the shipments were 1,000,000 tons more, which, as has been said before, was held over from 1895. The price of Bessemers remained practically stable during the year, the dealers not deviating from the standard scales fixed by the ore association at the beginning of the season, which were $4.50 to $5 for hard speculars and $4 to $4.25 for Bessemer hematites.

There were more non-Bessemers sold during the year than was anticipated when the season opened. During the latter part of the season especially, the demand for non-Bessemers was fairly good and the prices on these ores fluctuated somewhat. Early in the season they brought $2.75 to $2.85 at some of the Lake Erie ports. During the summer the price had fallen from 30 to 40c., but there was a recovery under the demand which marked the close of the season.

Lake Freight Rates on Ores.—The year 1896 differed widely from its immediate predecessor, so far as lake freight rates were concerned, for the tables were turned and the shippers had their inning. Instead of being at the mercy of the vessel-owners, as they were during the latter part of the season of 1895, they practically dictated their own terms during the last few months of 1896. The present outlook is that next year will be a still harder one on the vessel-owners, as contracts have been awarded for the construction of a number of heavy freight carriers, which will be put into commission next season. In 1895 the average "wild" rates, or rates ruling from day to day, were 50% higher than the contract price. Many new vessels were put into commission, and the result was that the order was reversed in 1896, the "wild" rates being about 60% less than the contract rates made before the season opened. Season ore contracts were made last spring from Ashland at $1.05, from Marquette 95c. and from Escanaba 70c. The average "wild" rates were: Ashland, 77c.; Marquette, 66c.; Escanaba, 52c.

Pig Iron.—Considering all the circumstances, pig iron has held its own fairly well in this market during the past year. The highest quotation for Bessemer pig in last January was $13 and it was the same in December. On the whole, the market seems to have improved, as the lowest quotation in December was $11.75, against $10.50 in January. The high-water mark was reached during the latter part of May and the first week in June, when it brought $14. It came very near touching the low mark again in October, when it sold at $10.75, only 25c. advance over the low price of last January. The following table will show the range of the price of pig during the year, with averages for each month:

PRICES OF BESSEMER PIG IRON AT CLEVELAND, 1896.

Month.	Highest.	Lowest.	Average.	Month.	Highest	Lowest.	Average.
January	$13.00	$10.50	$11.75	July	$12.75	$12.25	$12.50
February	13.00	13.00	13.00	August	12.25	12.25	12.25
March	12.75	12.75	12.75	September.	12.25	12.25	12.25
April	13.75	13.75	13.75	October	12.00	10.75	11.31
May	14.00	13.75	13.81	November.	13.00	11 50	12.31
June	14.00	12.75	13.12	December.	13.00	11.75	12.38

The sales during the early part of the season were fairly good, and up to May and June the business was considered good. About that time, however, the agitation of political questions began to attract the attention of the public, and in July there was a perceptible drop, a part of which was due to the usual shut-downs of some of the furnaces. The shut-downs were of longer duration than ordinarily, however, the furnacemen preferring to wait until political questions were settled. When the election was over furnaces were put in blast every week, until the first of last month, when out of the 28 furnaces in this section 13 were in blast, with a weekly capacity of 16,184 tons. The other 15, with a weekly capacity of 18,558 tons, were out of blast, but it is thought in this city that some of them will be in operation early in 1897. The prospects, as the year closes, are for a gradual but steady improvement in business.

THE NEW YORK IRON MARKET IN 1896.

New York is not in any sense a primary iron market, nor an important distributing center in the iron trade. It is chiefly an agency market from which a certain district is supplied. The course of the local market in 1896 followed quite closely that of the general trade, and no unusual changes are to be noted. For the greater part of the year dullness and depression prevailed, resulting from the financial conditions. Sales were limited by the smaller needs of the shops and foundries, and there was a general tendency throughout the year to limit buying to immediate necessities and to avoid carrying large stocks.

The structural iron market, usually an important section, felt the effects of the depression. Some large buildings were begun, but other projects were held back on account of the difficulty of financing them, and the building record was rather a limited one. At the beginning of the year a good deal of local cable and electric street railroad work was promised, but it failed to come out, on account of financial difficulties, and most of it was postponed to 1897.

The features of the year, if they were of sufficient importance to be called features, were the increased sales of Southern pig iron in this district, and the low prices of most kinds of merchant iron and steel. For a large part of the year there was so much shading and allowance of commissions, etc., that it was difficult to make reliable quotations.

Upon the whole, the local iron-men will look on the passing of the year without regret, and most of them hope for much better things in 1897.

THE PITTSBURG IRON TRADE IN 1896.

BY OUR SPECIAL CORRESPONDENT.

In the iron and steel trade 1896 will long be remembered as a remarkable year, showing the wonderful workings of the iron and steel products and the large increase in the mammoth plants in various parts of the country; works that a few years ago were considered of large capacity appear very insignificant at the present time. The year just closed was not a very favorable one compared with the preceding one, the volume of business showing a large falling off. The Bessemer sales in Pittsburg for 1895 reached the large amount of 1,915 545 tons. The total sales of last year of all descriptions were 3,597,323 tons, being largely in

SALES OF BESSEMER PIG IRON, STEEL BILLETS AND TOTAL SALES AT PITTSBURG.

	Bessemer Pig.	Steel Billets.	All Kinds.
First six months	574,871	268,200	1,295,764
Second six months	341,350	108,700	767,129
Total	916,221	376,900	2,062,893

WEEKLY PRICES OF BESSEMER PIG IRON AND STEEL BILLETS IN PITTSBURG FOR 1896.

Week.	Price Per Ton.		Week.	Price Per Ton.	
	Bessemer Pig	Steel Billets.		Bessemer Pig	Steel Billets.
January 4	$10.85@11.50	$16.00@16.50	July 4	$12.40@12.65	$19.75@20.25
" 11	11.25@11.50	16.10@16.50	" 11	12.25@12.60	19.00@19.75
" 18	11.75@12.60	16.50@17.50	" 18	12.20@12.40	19.35@19.75
" 25	12.75@13.35	17.25@18.60	" 25	11.70@12.00	19.10@20.00
February 1	13.25@13.50	17.75@18.25	August 1	11.25@11.50	19.50@19.80
" 8	12.75@13.15	17.50@18.25	" 8	11.25@11.75	18.90@20.25
" 15	13.00@13.50	17.35@18.25	" 15	10.75@11.25	19.25@20.25
" 22	12.85@13.50	17.50@18.00	" 22	10.90@11.15	19.75@20.25
" 29	12.40@12.50	17.50@17.85	" 29	10.75@11.20	18.75@20.25
March 7	12.50@12.60	17.40@17.65	September 5	11.00@11.75	19.50@20.25
" 14	12.40@12.75	17.30@17.75	" 12	11.75@12.00	18.75@20.25
" 21	11.85@12.25	17.15@17.50	" 19	11.50@11.85	19.50@20.25
" 28	12.35@12.50	17.25@17.85	" 26	11.50@12.00	19.50@20.25
April 4	12.50@13.75	17.40@20.00	October 3	11.50@12.00	19.50@20.25
" 11	13.60@13.85	19.85@20.25	" 10	11.40@11.50	19.40@20.25
" 18	13.25@13.75	19.50@20.00	" 17	11.85@12.00	19.80@20.25
" 25	13.40@13.60	19.40@20.25	" 24	11.90@12.10	19.90@20.25
May 2	13.00@13.40	19.35@20.25	" 31	11.75@12.25	19.60@20.25
" 9	12.75@13.00	19.50@20.00	November 7	12.25@12.75	19.85@20.25
" 16	12.65@13.00	19.50@20.25	" 14	12.40@12.60	20.00@20.25
" 23	13.00@13.25	19.65@20.25	" 21	12.35@12.75	19.60@20.25
" 30	12.50@13.25	19.25@20.25	" 28	12.10@12.30	19.50@20.25
June 6	12.50@13.35	18.75@20.25	December 5	12.00@12.30	19.50@20.25
" 13	12.30@12.75	19.35@20.25	" 12	11.75@12.00	19.50@20.00
" 20	12.50@12.75	19.00@20.25	" 19	.....	.....
" 27	12.40@12.50	19.50@20.25	" 26	.....	.....

PRICES OF IRON AND STEEL IN PITTSBURG IN 1896.

Month.	Pig Iron.		
	Bessemer.	No. 1 Foundry.	Gray Forge.
January	$10.85@13.35	$12.75@13.75	$10.50@12.25
February	12.40@13.50	12.50@13.25	11.00@11.50
March	11.85@12.75	13.00@13.75	10.70@11.25
April	12.50@13.85	13.00@13.50	10.90@11.50
May	12.50@13.40	12.25@13.25	10.75@11.15
June	12.30@13.35	12.40@13.30	10.60@11.00
July	11.70@12.65	12.00@13.00	9.75@10.75
August	10.75@11.75	11.75@12.50	9.50@10.00
September	11.00@12.00	11.65@12.20	9.50@10.16
October	11.40@12.25	11.60@12.25	9.75@10.25
November	12.10@12.75	11.75@12.25	10.20@10.80
December	11.75@12.20	12.00@12.25	10.00@10.60
Year	$10.75@13.85	$11.60@13.75	$9.50@12.25

Month.	Ferro-manganese.	Steel Billets.	Wire Rods.	Sheet Bars.	Muck Bars.
January	$52.32	$16 00@18.60	$23.79	$18.19	$19.91
February	51.79	17.50@18.25	23.53	19.73	21.00
March	49.85	17.15@17.85	22.59	19.84	20.73
April	49.95	17.40@20.25	25.94	22.38	21.22
May	50.33	19.25@20.25	27.63	22.21	21.18
June	50.10	18.75@20.25	26.41	22.36	20.73
July	49.33	19.00@20.25	25.68	22.50	20.38
August	49.08	18.75@20.25	25.13	22.23	19.63
September	49.41	18.75@20.25	25.50	22.58	19.79
October	49.33	19.40@20.25	24.29	22.19	19.90
November	49.42	19.50@20.25	24.75	22.39	19.99
December	49.19	19.50@20.25	24.19	22.50	19.91
Year	$50.00	$18.41@19.75	$24.95	$21.59	$20.36

DECEMBER PRICES OF IRON AND STEEL AT PITTSBURG FOR LAST FIVE YEARS.

	1892.	1893.	1894.	1895.	1896.
Bessemer pig	$13.75@13.80	$11.00	$10.25	$12.75	$11.80
No. 1 foundry	14.25@14.50	12.25	11.40	14.25	12.25
No. 2 foundry	13.25@13.50	11.25	10.40	13.50	11.50
No. 3 gray forge	12.60@12.65	10.00	9.50	12.00	10.40
No. 4 gray forge	12.50@12.60	10.00	9.25	11.75	10.25
White iron	12.00@12.25	10.60	9.00	9.00	9.75
Mottled	12.00@12.30	10.25	9.00	9.00	9.75
Silvery No. 1	10.00@10.25	13.50	13.60	14.80	9.80
Ferromanganese 80%	60.00@62.00	52.50	49.50	54.00	49.25
Charcoal—					
No. 1 foundry	20.00@20.50	18.50	17.50	17.80	17.50
No. 2 foundry	19.00@19.50	18.00	16.25	17.00	16.00
Cold blast	25.00@26.50	25.00	23.50	23.00	23.25
Warm blast	19.00@19.50	18.00	16.50	16.00	16.00
Spiegel 20%	28.50@29.00	23.75	18 50	18.00	17.00
Muck bar	24.50@24.75	21.00	18.40	21.00	20.00
Steel billets	22.00@23.00	16.75	15.15	16.50	20.00
Steel rail ends	15.50@16.00	11.50	10.50	14.00	13.15
Steel bloom ends	16.00@16.25	12.00	10.45	14.00	13.00
Old iron rails	20.00@21.00	14.50	12.50	15.00	16.00
Old steel rails	14.50@15.00	10.50	10.00	13.00	13.00
No. 1 wire scrap	20.00@21.00	16.25	10.00	14.00	13.00
No. 2 wire scrap	15.00@15.50	15.00	9.50	12.50	11.00
New steel rails	30.00@31.00	24.00	22.00	28.00	28.00
Bar iron	1.60@ 1.65	1.45	1.15	1.25	1.20
Iron nails	1.55@ 1.60	1.10	1.00	1.25	1.50
Steel nails	1.55@ 1.40	1.10	1.00	1.25	1.50
Wire nails	1.55@ 1.60	1.20	1.00	1.30	1.65
Coke at furnace	1.90@ 1.95	1.15	1.00	2.00	2.00

excess of any year in the history of the United States. The production of Bessemer from January to June 30th the present year was 574,871 tons; billets, 268,200 tons; all descriptions reached 1,295,764 tons; greater things are promised for 1897. Prices for all kinds of products have been irregular and uncertain. Pig iron here is higher than in England. The South has been making large shipments to European markets; at this time Birmingham, Ala., has engagements said to exceed 40,000 tons. This is a great change in the situation and shows how this country is progressing in the way of manufacturing.

The year's prices on leading products shows a wide range of values. Bessemer opened January at $10.85 to $11.50; closed $12.75 to $13 35. February opened $13.25 to $13.50; closed $12.40 to $12.50. March opened $12 50; closed $12.35 to $12.50. April opened $12.50 to $12.75; closed $13.40 to $13 60. May opened $13 to $13.40; closed $12.50 to $13.25. June opened $12.50 to $13.35; closed $12.40 to $12.50. July opened $12.40 to $12.65; closed $11.70 to $12. August opened $11.25 to $11.50; closed $10.75 to $11.20. September opened $11; closed $11.75. October opened $11.50; closed $12. November opened $12.40 to $12.75; closed $12.15 to $12.25. December opened $12.15; closed $12.20.

Steel Billets.—Prices were governed by the pool that fixed prices at $20.25 from April 1st; at the same time middlemen sold large amounts at prices ranging from $18.75 to $19.50. The rates from January to April were as follows: January opened $16; closed $17.25 to $18.60. February opened $17.75 to $18.25; closed $17.50 to $17.85. March opened $17.40 to $17.65; closed $17.25 to $17.85.

There is considerable gossip about the billet pool; meetings are being held in private. Opinions differ widely as regards the future; the fact is prices are unsettled—just how it will terminate will be learned later.

Gray forge or mill iron also showed many fluctuations: January opened $11.25 to $11.50, closed $11 to 11.35; February opened $11 to $11.30, closed $11 to $11.10; March opened $10.90 to $11.25, closed $10.70 to $11; April opened $11 to $11.25, closed $11.15 to $11.25; May opened $11.10 to $11.15, closed $10.75 to $10.90; June opened $10.85 to $10.90, closed $10.60 to $10.70; July opened $10.50 to $10.75, closed $9.75 to $10; August opened $9.80 to $10, closed $9.65 to $10; September opened $9.60 to $10, closed $9.60 to $9 90; October opened $9.75 to $10.15, closed $10 to to $10.25; November opened $10.20 to $10.40, closed $10.25 to $10.80; December opened $10.25 to $10.60, closed at about the same range of prices.

The tables given herewith show in the first place the sales of Bessemer pig, of steel billets and the third column the total sales of iron and steel in Pittsburg during 1896. The other tables show by weeks the range of prices of Bessemer pig iron and steel billets, which are regarded as the leaders of the market; the monthly range of prices of the various descriptions of iron and steel; and the closing prices in December of the different products.

Sales and Prices of Iron Ore.—The following figures show the sales and prices of iron ore for the past five years. The figures for 1896 show a material advance over the three preceding years. In 1892 the sales were 5,752,000 tons at prices ranging from $4 to $5 per ton; what prices

SALES OF IRON ORE AT PITTSBURG.

Date.	Tons.	Quality.	Price.
1896	3,300,000	Bessemer	$3.75@4.10
1895	4,300,000	Bessemer	2.90@3.75
1894	2,950,000	Bessemer	2.25@3.25
1893	4,010,000	Bessemer	2.75@3.00
1892	5,752,000	Bessemer	4.00@5.00

will be demanded for 1897 is not yet known. Sales were all made deliverable on the docks at Cleveland and Lake Erie; this will be continued until the canal is completed between Pittsburg and Cleveland, when our mills will be supplied direct from the mines at less than half the present cost.

Coke Prices.—Coke prices through the year have been on the basis of $2 per ton, f. o. b. at ovens, for furnace coke. Dealers, however, have made contracts right along at $1.75 per ton, and even at lower rates. Large consumers have made their own rates also.

THE MINERAL INDUSTRIES IN THE SOUTH.

By W. M. Brewer.

We give in the following a sketch of the progress made during 1896 in the mineral bearing sections of Georgia and Alabama. Gold and silver will be found in the article on those metals.

IRON ORE AND COAL.

It is almost necessary, especially in the Southern States, to consider the industries of mining iron ore and coal under one heading, because with the exception of the limited supply of coal mined exclusively for domestic purposes, the remainder is employed for the manufacture of coke to be used in the blast furnaces. When the statistics are all collected of these two industries it will be seen that during the past year there has been a falling off of the production as it was returned for 1895. Owing to the depressed condition of business and the agitation in politics during the past twelve months it is only natural that such a decrease should have occurred. It is impossible at this writing to give the exact figures which represent the output of these minerals in Georgia and Alabama during 1896. But from the information at present in my hands it would appear that the decrease in the production of coal will probably reach 500,000 tons. When all the figures are in I believe I am warranted in saying that the actual decrease will come under this quantity rather than over it. This decrease will be found in the production for domestic purposes rather than in that for the manufacture of coke.

In making this statement a guide is furnished by the estimate of the production of pig iron during 1896, which will be found to very closely approach that for 1895, when the Birmingham district produced a larger tonnage than had ever been reported for that district in any one year before. This production has not resulted from the fact of any increase of the number of furnaces in blast, but rather from the

greatly improved practice in metallurgy. To-day there are furnaces with a guaranteed capacity of 125 tons of pig iron per day, which are actually producing from 180 to 200 tons per day. While the production of pig iron has so closely approached that during 1895, yet the output from the iron ore mines, so far as the limonite or brown ore is concerned, has considerably decreased, while the output of red hematite from the Birmingham district has increased in proportion.

As is generally known, the bulk of the limonite ores mined in Alabama and Georgia comes from Bartow and Polk counties in Georgia and Cherokee, Calhoun and Talladega Counties in Alabama. Reports from all these counties show a considerable decrease in the output during 1896, as compared with that during 1895. The main cause for this has been the lack of water supply during the past summer. In consequence of this many of the ore washers were run on considerably less than full time and some were shut down entirely. This condition is being met by some of the companies in the most practical way possible—that is, by boring deep wells with the expectation of obtaining a sufficient supply in future to overcome any deficiency caused by such an extremely dry season as the past has been.

The production of charcoal iron in Alabama and Georgia has practically been but very light during the past twelve months. One furnace, that at Rock Run, Alabama, has been in blast continuously during the year, and the Shelby furnace a portion of the time. The production from these two will represent the manufacture of charcoal pig iron in the two States for 1896, and the quantity produced will aggregate less than probably during any year since the industry was started. The reason for this condition has been the lack of demand for this grade of iron. In the past all charcoal iron was used in the manufacture of car wheels, but to-day a mixture of charcoal and coke iron is almost universally used by the car-wheel manufacturers, and it is freely asserted that some are manufacturing wheels from all-coke iron. Of course while such conditions exist the charcoal furnaces will remain out of blast, and many companies will adopt the same policy as has been adopted by the Clifton Iron Company at Ironaton, Ala., which has rebuilt one of its charcoal furnaces and so altered its construction as to make it one of the most modern types of coke furnaces, with a guaranteed capacity of 125 tons of pig iron per day, and probably an actual capacity of from 175 to 200 tons per day, which has been demonstrated to be possible by the practice in the Birmingham district.

The export trade in both coal and pig iron, which has been gradually built up by the Alabama operators, has become quite important and would be very much more extensive were the carrying capacity of the tramp steamers from Mobile increased, because it has been demonstrated that both coal and pig iron can be delivered at Mobile from the Alabama districts at such a low figure as insures successful competition with the products from any other section of the United States. The same condition exists with regard to Alabama coke, and there is no doubt but that during the coming year the export trade will be extended, unless the domestic market is very much more favorable than has been the case for several years past.

Considerable interest is being manifested by the iron-masters with regard to the adaptability of Alabama coal for the manufacture of coke in by-product ovens. Up to the present time no attempt has been made to construct any of these in the State, but the most important companies are thoroughly investigating the subject. The question of manufacturing a better fuel has been one that has claimed the attention of such men as Dr. Wm. B. Phillips, Chief Chemist for the Tennessee Coal, Iron and Railway Company, in the laboratory for the past few years, just in the same manner as the question of higher grade ore for the furnace burden has done. It is largely owing to the researches of this gentleman that the furnace practice in the Birmingham district has been so much improved during recent years, as to increase the output of the furnaces above their guaranteed capacity.

BAUXITE.

The industry of mining bauxite has been prosecuted during 1896 by the same companies which have been engaged in it since 1891: The Republic Mining and Manufacturing Company, the Southern Bauxite Company, and the Georgia Bauxite Company. While their shipments have aggregated only some 15,000 tons as against 18,000 in 1895, yet they all express themselves satisfied as to the year's business. There have been no new discoveries of bauxite mines reported, unless the opening of a deposit by the Alabama Mineral Land Company near Anniston can be considered a new discovery. Really this was one of the first discoveries made in the State, but no attempt had been made until the spring of 1896 to develop it, and determine the grade of the ore and extent of the deposit. Recently published newspaper reports have stated that extensive bauxite properties, northerly from Rome, Ga., had been purchased by New York capitalists, and would be worked during 1897. The demand for this mineral still remains quite limited, but if an export trade would result profitably to the shippers, the probabilities are that such a business could be built up. One shipment was made during 1896 to Germany, but whether this will be followed up cannot at present be learned. The deposits which have produced the bulk of the shipments since 1891, and are located in Cherokee County, Ala., have been the main producers in the past year. While it can hardly be stated that the ore bodies are inexhaustible, yet they are certainly holding out better than a great many anticipated would be the case, and so far as developed these deposits show large quantities of ore yet in reserve.

The custom of shipping the ore in its crude state after being merely sun-dried for a short period, is being discontinued, and various types of kilns have been erected at the different mines for the purpose of drying the ore with artificial heat preparatory to shipping. The Georgia Company has adopted the policy of washing a portion of its ore by passing it through an ordinary double log washer before sending it to the kiln to be dried. Because of this, that company has been enabled to ship a vast quantity of bauxite of high grade from the waste dumps which had accumulated from screenings. Whether washers will be put in by the other companies or not I cannot say at present, but from the appearance of the dumps there has not apparently been as great a loss of bauxite in the Cherokee County district in Alabama as there was in the Barnsley district in Bartow County, Ga., where the Georgia Bauxite Company operates.

COPPER.

Early in the spring of 1896 the old Woods Copper mine, situated near the border of Randolph and Cleburne counties, in Alabama, was unwatered by Mr. Detrich and associates from Montana, who are now engaged in sinking the working shaft deeper, and who propose to thoroughly prospect the property and ship the ore, instead of attempting to smelt it at the mine and ship the matte. These gentlemen report that they have determined that the ore body at one point at least is 20 ft. in thickness and will average of higher grade than that mined at Ducktown, Tenn. Nothing definite can be stated at present as to what the results of their operations will be. This mine was operated in the seventies, and tradition says that very large quantities of copper were produced from it. Whether the work at that time was profitable or not should have no influence on the result of working at the present time, because the progress in both mining and metallurgy has been so marked during the past 20 years that a property which could not be operated successfully then could, in all probability, to-day be placed on a dividend-paying basis, unless, of course, the extent of the ore body and the grade of the ore were such as rendered the operations in the past ridiculous. But from all accounts such conditions did not exist at the Woods mine. For these reasons the neighborhood in which the mine is located is being watched with a good deal of interest by copper miners generally, and no doubt if the operations at present being carried on are successful there will be quite an influx of prospectors into the district in the near future.

OTHER MINERALS.

So far as the mining of any other minerals in the States under discussion is concerned, unless it be granite and marble, which should hardly go under this head, no operations worth mentioning have been carried on during 1896. The occurrences of mica, graphite, corundum, kaolin and iron pyrites have been referred to so often that it is not necessary to repeat such reference here. The fact that all of these minerals are located some distance from railroad transportation has, of course, had a great influence in keeping them in the background. Whether this condition will be cause enough to prevent operators from developing such deposits in the future is problematical.

LEAD IN 1896.

The production of lead in the United States for the year 1896 from domestic ores of all kinds was approximately 184,000 short tons, showing an increase of nearly 10% over the previous year. The supply from foreign ores was also heavy, owing to the continued large imports of lead from Mexico in the form of bullion. The fluctuations of prices are given in the summary of the markets below:

THE NEW YORK LEAD MARKET IN 1896.

During the past year there has been a great depression in the value of the metal, due mainly to the very poor consumption, especially during the summer months, and also to a very heavy production. While it was feared a few years ago, when the duty on foreign importations, either in the form of pig lead or ores, was reduced from 2c. to 1c. per pound of pig lead, that home production would materially suffer, just the reverse has been the case and from year to year a rather large increase in the production has been noticeable. Nor is this unnatural. Low prices of an article always mean the greatest economy in producing and refining and reducing general expenses, and this is usually best attained when the output of a single producer is enlarged as much as possible. Neither had the decline in silver any influence on the production of lead. More than 80% of the production of American lead comes from ores carrying gold and silver and very often it is then considered as a by-product only, the precious metals being the main components of the ores. But the output of soft lead, which comes mainly from Missouri, has also increased, though during the time of the greatest depression in the summer hardly any producers were able to make both ends meet, and that exercised a check on the rapidly increasing production.

Of the lead refined in bond in the United States practically every pound was again exported and thus the industry has been carried on without any detriment to home producers, while our refiners have been able to successfully compete with Europe, much to the latter's chagrin.

The stocks at the beginning of 1896 were hardly heavier than 12 months previous thereto, and the opening prices for the year were moderately low at about 3c. to 3¼c., which was then considerably lower than the average of the preceding year. Fair business was doing at these figures during the month of January and in February a decidedly better demand set in, prices advancing slowly to 3¼c., which latter price unfortunately proved to be the highest quotation of the year.

In March quotations fell off and during all that month, April and May values remained fairly steady at 3·05c. to 3·10c. Toward the end of the latter month renewed flatness set in and a fairly large business took place, when at the end of June the market was disturbed by reports from Leadville that a rather serious strike had broken out, which threatened to have a decided influence on the production and value of lead. The Miners' Union had decided not to allow their members to enter the mines except at a minimum pay of $3 per day, while mine owners, under the depressed values of both lead and silver, did not see their way to submit to this dictation. A long and bitter fight followed, during which production suffered, but the poor consumption then existing was more than an offset for this shortage and the main sufferers were the entire Leadville camp and its mining industries.

The political situation at this time of the year had a marked influence on the article, and after the Chicago convention deliveries of refined lead continued to fall off more and more; in the main centers of the United States money became decidedly dearer, and some of the banks in the West were unable to give any support even to the best of their clients. This led to rather large realizations on the stocks then accumulated, and consequently a very large decline set in, which by the end of July brought prices down to 2¼c., New York, followed by a still heavier drop in August, when large quantities were marketed down to 2·70c., and by the end of the month as low as 2·60c., New York, was accepted for sev-

eral lots. This was the lowest price ever reported in the history of lead in the United States. Even some 20 years ago on the occasion of the great discoveries in the Leadville camp and when the fear of a deluge of lead made the trade rather nervous, values never came down as low as during this time. It must be stated that this figure in New York was rather below the figures accepted in the West, as the lowest prices on record are 2·45c., St. Louis, and 2·50c. Chicago, which are fully $2 per ton more than the then New York price; but this difference can mostly be explained by the fact that large quantities of lead could only be marketed in the East, and that therefore the buyers had to be given larger concessions.

After the first pressure was over values slowly advanced to 2·70c. and by the end of September 2·80c. New York was freely paid. Then with approaching elections and the uncertainty at that time prevailing in the trade, a decline again set in, and by the middle of October 2·72½c. New York and 2·50c. St. Louis were the highest prices obtainable. After that a marked improvement was noticeable, and before the end of the month nothing could be had below 2¾c.

The month of November then showed a very active trade; there was a good demand all around, and stocks, which had accumulated to a considerable extent at the different smelting works, could easily be marketed

Average Monthly Prices of Lead

In New York, for the years 1896, 1895, 1894, 1893, 1892; in cents per pound.

Month.	1896.	1895.	1894.	1893.	1892.
Lead:					
January	3·08	3.10	3·19	3·87	4·20
February	3·19	3 12	3·31	4·22	4·12
March	3·14	3·12	3·37	3·96	4·21
April	3·07	3·08	3·43	4·08	4·15
May	3·03	3·16	3·39	3·89	4·22
June	3·03	3·25	2·31	3·77	4·16
July	2·96	3·25	3·50	3·68	4·13
August	2·73	3·50	3·41	3.41	4·11
September	2·77	3·35	3·17	3 89	4·11
October	2·80	3·33	3·12	3 51	4·02
November	2 96	3·25	3·14	3·41	3·84
December	3 04	3 22	3·10	3.27	3·80
Year	2·98	3·23	3·29	3·73	4·09

at continually rising prices. Thus at the end of November the 3c. mark in New York and 2·75@2·80c. in St. Louis were again established. Even during the month of December, when out-door work begins to be interrupted and when prices usually show a decline, the firmness continued, as the quantities offered continued light in spite of some second-hand lots, purchased at low prices during the depression in the summer, were pressed for sale, the market closes fairly strong at 3·02½c. to 3·05c. New York and 2·77½c. to 2·80c. St. Louis.

NICKEL IN 1896.

The production of nickel in the United States in 1896, entirely from Canadian ores and matte, reached a total of 3,697,039 lbs., which compares with 2,678,661 lbs. in 1895, showing an increase of 1,018,378 lbs. Of the production in 1896 metallic nickel amounted to 1,600,049 lbs., the remaining 2 096,890 lbs. being in the form of oxide and sulphide.

This production may be said to represent the greater part of the world's output, as very little is reported from abroad outside of the small quantities made in Norway, Sweden and Germany. For a part of the year the Société le Nickel, in France, has had its works and its mines in New Caledonia closed, the stocks on hand being sufficient to meet all requirements for the metal for some time to come. The demand for nickel, except for use in steel making, does not seem to increase; and the amount required for alloying steel is still comparatively small. No great increase in the use of the metal industrially can be expected until it can be furnished at a much lower price than at present.

Prices.—Notwithstanding a comparatively light demand prices have been maintained at nearly the same level through the year. At the close of the year the current quotations in New York were 33c. to 36c. per pound for ton lots, and 37c. to 39c. for smaller orders. The limited extent of the trade and the absence of competition among producers have prevented fluctuations in price.

QUICKSILVER IN 1896.

The old California mines have been actively operated during the year, and in addition considerable prospecting and development work has been done in Siskiyou County. Very favorable reports have been received from the new cinnabar properties in the Cleelum district, Kittitas County, Wash. There are many other quicksilver localities in the United States, as the old ones in Oregon, the new discoveries in Texas and Colorado, and some scattering occurrences in Utah, Idaho and elsewhere, but, as hitherto, the California mines are the main reliance.

Receipts of quicksilver at San Francisco during the first 11 months of 1896 were 27,165 flasks, and estimating December arrivals on the basis of the two preceding months the total would be 29,165 flasks (of 76½ lbs. = 2,231,122 lbs), valued at $1,079,105, at an average New York quotation of $37 per flask. The receipts at San Francisco gauge the rate of production very fairly, but do not give the actual total, as the reports do not include shipments direct from the mines to New York by rail and quicksilver sold and shipped to gold and silver mines in this country without going to San Francisco at all. The total production of the United States, practically all of which comes from the California mines, is estimated at 33,012 flasks (2,525,418 lbs.) in 1896, having a value of $1,221,444 at the average New York price. This is 2,110 flasks less than the output in 1895, which was 35,122 flasks. As the receipts at San Francisco during the first half of the year had been unusually heavy this apparent decline in the total production for the year was unexpected.

Exports by sea from San Francisco have been brisk, going mainly to China, Mexico, British Columbia, Australasia (especially to New Zealand), and Central and South America.

The figures of the production of the Spanish and Austrian mines for the year just closed will not be at hand for some time, but it is understood that there has been little change as compared with their output in 1895. An increase is said to have been made by the Mexican mines, but these by no means produce enough quicksilver to meet the home requirements.

Prices.—The New York market opened at $40 per flask in January, with £7 7s. 6d. in London. These prices held until the middle of February, when the New York quotation fell to $37.50 and London to £7 2s. 6d. Another sharp drop occurred in March, quotations going to $35 and £6 17s. 6d. respectively, but the New York market quickly recovered to $37.50. In May and June the New York quotation shaded off to $37, following the successive drops to £6 15s. and £6 10s. in London. Again in July and August prices fell to $35.50, the London rate touching $6 7s. 6d.; but in the early part of September there was a reaction to $36 and £6 10s., and toward the end of the month to $36.75 and £6 12s. 6d., which quotations were maintained to the close of the year. In view of the activity in gold mining in all the world's gold districts, and the fair demand from China for supplies for making vermilion, with other uses remaining the same, a better scale of prices might have been looked for.

Imports of quicksilver into Great Britain for the 11 months, ending November 30th, 1896, were 3,536,178 lbs., as against 3,693,389 lbs., valued at £331,780 ($1,658,900), during the corresponding period of 1895—a falling off of 157,211 lbs. Re-exports from Great Britain during the 11 months were 2,354,297 lbs. in 1896 and 2,624,921 lbs. for the corresponding 11 months of 1895—a decline of 270,624 lbs. The excess of imports over re-exports indicates a British consumption and increase of stock during the first 11 months of 1896 of 1,181,881 lbs. in all.

TIN IN 1896.

The production of tin in the United States remained at the zero point during 1896. No metal was reported, nor was there even any prospecting carried on. The ill-success of past work has apparently discouraged all efforts. The consumption of tin, which in 1895 was increased owing to the growth of the tinplate industry in this country, decreased somewhat in 1896, owing to the general business depression.

The world's supplies of tin have continued to come from the Malay Peninsula, the Dutch East Indies and Australia. Straits tin, as the metal from the Malay Peninsula is called, continues to be the most important factor in the supply, but the production of Banka, Billiton and Singkep tin is increasing. There has been very little change in the Australian output. For 12 months ending November 30th, the total supplies of tin delivered in Europe and the United States are estimated at 59,135 long tons, of which 47,900 tons were Straits tin and 4,455 tons Australian tin. Stocks on hand in store and afloat on November 30th, were estimated at 32,789 tons, an increase of 5,478 tons over the corresponding date in 1895.

The imports of tin into the United States for the ten months ending October 31st were 35,638,425 lbs., showing a decrease of 9,855,906 lbs., or 21·7%, as compared with the corresponding period in 1895.

The supplies of tin have, in fact, increased more rapidly than the consumption, with the results shown in the market reports which follow.

THE NEW YORK TIN MARKET IN 1896.

Values for tin were depressed throughout the entire year in consequence of the bad statistical position, which several times during the year became quite alarming. On January 1st, 1896, the total visible supplies were 28,265 tons, or 3,348 tons more than in the previous year, while on April 1st the excess over the previous year was 6,238 tons. Then there was a falling off, which was due mainly to a great deal of tin having been accumulated in the East, where it was held back for speculative account, so that on July 1st the excess had gone down to 2,430 tons, but during the next three months shipments increased, and on October 31st, the total visible supplies amounted to 35,516 tons, or 4,725 tons more than in 1895, and on December 31st the visible supplies were 33,000 tons as against 27,000 tons in 1895, or 6,000 tons more.

As far as can be made out, production in the East appears to have reached its maximum about the middle of the year, and at this moment it can fairly be assumed that from the Straits Settlements supplies will remain stationary for some little time to come.

The total production of tin still appears to be somewhat in excess of the apparent consumption, and as long as this continues, there is very little chance of prices advancing, unless strong speculative factors can give sufficient support to the markets. It will be noticed that the total shipments for the year, so far as exports from Singapore and Penang are concerned, are only slightly below the quantity shipped in 1895, but it is evident that some tin is still held back, though perhaps not so much as at the end of the previous year. In any case, the stocks remain large, and are sufficient for about an eight to nine months' supply, so that it would require rather an increase in consumption to get down to the level of only two years ago.

Under the circumstances, it is certainly not astonishing that throughout the year prices kept on a lower level than for a number of years past, and during a not inconsiderable portion of the year ruled only slightly above 13c. per lb.

Deliveries in the United States have rather increased, thanks to the sound and healthy development in the tin industry of the country. Not many years ago, it was still considered the monopoly of Wales to produce tin and terne plates cheaper than in any other part of the world, but the energy of our home manufacturers has since proved the fallacy of this theory. And now that this comparatively new industry has taken root in this country, it has come to stay, and there is no possibility—protection or no protection—that the foreigners will again take possession of the markets as in former times; and there is no reason why this should not be so, considering that raw material can be had here just as advantageously as abroad, and the slight extra cost in labor is offset by the saving of the freight and boxing on tin plates shipped from the other side.

The consumption on the part of tin-plate manufacturers had a marked influence on our deliveries of tin, and while during the great depression of the summer, imports and deliveries would no doubt have shown a not inconsiderable decrease, there was actually an increase during every month of the year.

The stability of prices has been of inestimable benefit to consumers, who, as far as it can be ascertained, continue the policy now followed for several years of buying only for their immediate wants, which they did chiefly for two reasons: First, the general commercial depression during the spring and summer; and, second, owing to the unfavorable statistical position. The first reason being now removed, and the second likely to change, it is a question now whether it is not time to somewhat change this policy and lay in some supplies in view of a possible rise in the article, the more so as it has always been shown that a decline in values does not bring about either an expansion or a contraction of the tin trade, as for instance is the case with copper and lead.

At present there are no signs of a large speculation being carried on in tin. The English syndicate, which disturbed prices in '94 and '95, has long realized on its holdings and gone out of existence, with a result not at all gratifying to those interested. The heavy stocks and still large production, coupled with rather dear money in Europe, is not conducive to a repetition of the operation, at least for the moment, but in the event of one or more of these factors changing, a repetition of former operations is not at all unlikely.

Early in January, this year, prices suffered considerably, in consequence of the failure of one of the largest tin operators on the New York Metal Exchange, and a great many transactions were made at 13c. and a little below.

The better feeling which was noticeable in February did not fail to influence tin, and very soon the market went up to 13¼c., but toward the end of the month, with the East a free seller, these prices gave way somewhat, and continued fairly steady during March and April.

In May, with good deliveries, a good advance set in, and for a time prices ruled very firm between 13¼ and 13⅜c., which continued up to the end of July, but from August on prices showed a decided tendency to decline, and by the middle of that month not more than 13⅜@13½c. could be realized, which was soon followed by a larger drop. Early in September 13¼c. was the outside figure, and by the end of the month 13c. was reached.

From the beginning of October up to the end of the year, the market remained very steady between 12⅞c. and 13c., one of the main features having been that during the entire six months, from July to December, spot tin remained exceedingly scarce, and during most of the time commanded a premium of ⅛@¼c., not at all brought about by speculative operations, but simply on account of the dearth of the metal. The bulk of the heavy shipments which arrived during these months was transshipped from steamer's dock direct to the trade, and only small quantities were put into warehouse to be quickly re-shipped before further supplies came in. The closing quotations are 12⅞@13c. for spot and January delivery and 13@13⅛c. for February to April.

Average Monthly Prices of Tin

In New York, for the years 1896, 1895, 1894, 1893, 1892; in cents per pound:

Month.	1896.	1895.	1894.	1893.	1892.
Tin:					
January	13·02	13·25	20·16	19·99	20·50
February	13·44	13·35	19·60	20·30	20·01
March	13·30	13·20	19·09	20·71	20·25
April	13·34	14·00	19·75	20·81	20·50
May	13·54	14·65	20·21	19·96	20·80
June	13·59	14·15	19·75	19·76	22·00
July	13·63	14·40	19·22	19·15	21·00
August	13·49	14·35	19.22	18·81	20·50
September	13·15	14·45	16·27	20·14	20·35
October	12·94	14·65	15·35	20·84	20·50
November	13·09	14·40	14·56	20·61	20·80
December	12·96	13·91	13·81	20·67	20·00
Year	13·29	14·05	18·08	20·15	20·60

The speculative dealings on the New York Metal Exchange, which in former years, at times assumed very large proportions, have almost entirely died out, not at all to the detriment of the trade.

THE LONDON TIN MARKET IN 1896.

This market has, on the whole, been steadier than the previous year's, the total range of values for 1896 having been only about £6 per ton, whereas the 1895 values varied from £58 12s. 6d. to £68 17s. 6d., or over £10 per ton. During the year under review, however, the general trend of values proved to be toward a decidedly lower level than in the preceding year; in fact at one point, which will be duly noted in its place, the price touched about the lowest figure known, viz., £56 per ton.

At the outset the market was affected by the perturbations in the political world, which here, as in copper, tended to repress speculative activity, while the failure of a New York operator assisted the consequent decline. From £60 17s. 6d. at the close of 1895, Straits tin fell during the first week in January to £57 17s 6d.; but this depression soon gave place to a reaction when the political sea grew smoother, and although there was not much speculative demand, there was, on the other hand, a pretty fair inquiry from consumers, chiefly, however, for alloys, as the tin-plate trade continued in a very unsatisfactory state. Silver was an element of further strength, as it remained steady with an upward tendency, and, aided by these factors, Straits tin rallied to £59, a large government inquiry having at this juncture enhanced the value. Sellers coming out at these higher values, a relapse occurred to £58 10s. cash; but this in its turn was followed by a recovery to £60 7s. 6d., and so the values continued to oscillate between £58 10s. and £60 7s. 6d., the latter figure being about the closing value for the month.

February was for the most part a colorless month, with no prominent speculative movement either way, and with values ruling steady at £61 5s. cash to £60, the close being at about 15s. per ton above the worst. The American market being dull, our market received no support worth naming from that quarter, but features which tended to steady the tone were the decrease of about 500 tons in the visible supply for the month and the decrease in the quantities of English tin smelted, owing to a falling-off in the output at Cornish mines.

The first week in March was quiet at £60 15s. to £60 5s. cash Straits, with Australian at a premium of about 12s. 6d. per ton, and these prices to 5s. lower constituted the range also during the remainder of the month. Consumers continued to buy moderate quantities, but the speculative element seemed to be almost non-existent, there being still considerable uneasiness felt concerning political affairs and also as to the condition of trade and finance in the United States, from which quarter accordingly the tin market again received very little support. During the month of March the visible supply, in and afloat to Europe, increased to the extent of about 1,300 tons, and the market, after opening a shade firmer at the beginning of April, with business at up to £60 13s. 9d., began to fall back steadily, until at the middle of the month it touched £59, the decline of silver from 31 1/16d. to 30 13/16d. having assisted the downward movement.

The remainder of the month passed off quietly, with values ranging from the lowest point named up to £59 17s. 6d. cash Straits, while the premium for Australian had advanced to about 20s. per ton. The demand for consumption had been fairly good throughout the month, but in the absence of active speculation, and with the large shipments from the Straits, resulting in a fresh increase in visible supplies, while it was well known that large stocks were accumulating at Penang, the comparative weakness of the market is easily understood. The figures of the Banca production, published about this time, also showed an increase, about 600 tons for 1894-95, as against 1893-94.

May brought with it no new features of importance, stocks and shipments continuing heavy in comparison with purchases while speculative interest appeared almost completely dormant. London stocks, in particular had largely increased, though their being in firm hands obviated any pressing danger to values from that source, while against that fact there was the consideration that America, having so long abstained from active buying, had let her stocks run very low. Values during this month ruled very steadily on the whole, the entire range being comprised between the figures £59 8s. 9d. and £60 12s. 6d. cash Straits.

During the first fortnight of June the value of Straits tin remained steady at £59 17s. 6d. to £60 12s. 6d. cash. In the third week there was a sudden spurt, caused by a certain amount of speculative activity, induced, perhaps, by the stronger copper market, and a rise to £61 15s. took place, the month closing, however, about £1 per ton lower again.

During July the tendency of the article was, in the main, toward easier rates, and the total decline for the month was about £1 per ton. The causes of the depression were those already alluded to, the chief factors being the lethargy of speculation in face of the continued large shipments from the Straits and of the uneasiness felt as to the issue of the struggle between the rival factions in the States, where trade and manufacture were suffering greatly.

The closing values for July were steadily maintained during the earlier part of August, at least approximately, cash Straits being dealt in at £60 to £60 2s. 6d., and three months at £60 10s. to £60 13s. 9d., but toward the close of the second week the liquidation of considerable quantites of spot tin brought about a fall of a few shillings. Silver, too, which had long remained fairly firm at over 31d. per oz., now declined to 30⅝d., though there was a slight rally before the close. A small demand from America for early delivery and fairly good demand here for the same position, improved the value temporarily, but the month closed dull at £59 5s. cash and £59 15s. for three months.

Early in September the uneasiness felt in financial and political circles and the fear of a tight money market, were reflected in the advance from 2% (at which it had stood for about two years) to first 2½% and then 3%, in the Bank of England rate of discount, and by this, together with the continued excessive output at mines, and a further fall in silver, the position of tin was greatly aggravated, so that free "bear" speculation was induced, resulting in the value running rapidly down to the record price alluded to at the opening of this report, the figure £56 being reached early in October for spot Straits, a figure so low that authorities consider it certain if continued for any length of time to arrest the over-production which had so long been weighing upon the market. Silver had also shared in the downward tendency, and after various fluctuations finally closed for October at 29 15/16d. However, the bottom price of tin referred to above, was soon replaced by better values, the low level having tempted buyers, especially on the Continent, and their purchases raised prices, before October closed, to nearly £59 per ton.

At the beginning of November the recovery in silver to 30 3/16d. was attended by a further advance to £59 5s. for spot tin, but despite the result of the Presidential election in the States, the improvement was not maintained, a fresh relapse in silver inducing a drop of nearly £1 in the price of Straits. But we should here point out that even with the large shipments made during the year from the Straits, the general statistical position had been steadily improving, for consumption had been very active, the result being that the quantities of tin delivered actually exceeded those of supplies for the period of 12 months ending with November 30th, whereas in the two preceding similar periods supplies had exceeded by several thousand tons per annum the figures of consumption.

Further, the shipments for the 12 months against the previous similar period show a decline of about 1,000 tons, and with the improved condition of the tinplate trade in America, and bearing in mind the generally admitted fact that the Straits production has about attained its maximum, it will be seen that everything augurs well for the continuance of the improvement in the statistics.

The month closes with Straits tin at £58 2s. 6d. cash and £59 three months, while Australian still commands a premium of about 32s. 6d. per ton for good brands. English tin is held for £62 to £62 10s for common ingots, £63 to £63 10s. for bars and £64 to £64 10s. for refined ingots.

ZINC IN 1896.

The production of zinc in this country in 1896 was 77,084 short tons. The conditions of the markets here and abroad will be found below. The Western zinc producers have worked during the year under rather unfavorable conditions, a large production and a decreased demand having combined to make the situation a difficult one. The combination of smelters in the Missouri-Kansas district had a considerable part of its producing capacity idle during the year. At the present time this combination is losing ground and as the year closed it was actually making less metal than the outside smelters. In the East

matters have been in much better condition and the Eastern producers have generally been busy. They have succeeded not only in supplying the current demand, but in placing a considerable quantity of their spelter abroad, exports having been large, especially in the closing months of the year. Besides the shipments of spelter there have been some exports of ore, for which good prices have been obtained in Europe. These ores have been from the New Jersey mines and have gone in the form of concentrates.

The production of zinc oxide in the United States in 1896 was 16,799 short tons, which compares with 22,690 tons in 1895, showing a decrease of 5,891 tons, or 25% for the year.

THE NEW YORK SPELTER MARKET IN 1896.

During the past year the course of the spelter market has been subjected to violent fluctuations, more or less due to what may justly be called artificial circumstances. For a number of years past the position of the smelters of zinc ores has not been a desirable one; they had to struggle very hard in order to get meager profits. The competition of the different smelters when buying their ores has, since the growth of the industry, been so keen that only the best-managed works were able to show some returns for the capital invested, which in any case were not what they might or ought to have been. Very often long periods existed when the metal contained in the ore was worth more, after adding smelting, refining and incidental charges, than the refined spelter could be marketed at, and, naturally, those interested have been considering for a long time past what steps, if any, could be taken to put the business on a better paying basis. Various attempts to this effect had been made in the past, but always failed, until in January last a number of smelters were united, partly by purchase and partly by lease, in a new company, called the Cherokee-Lanyon Spelter Company, and which was comprised of the following works: Cherokee Smelting and Refining Company, Robert Lanyon & Company's two works in Pittsburg and Nevada, S. H. Lanyon & Brothers, Pittsburg & St. Louis Zinc Company, Girard Zinc Company, Rich Hill, Scammonsville and Columbia Smelting companies, with a total output of from 30,000 to 35,000 tons of spelter per annum, while all the other Western producers, with an output of about 40,000 tons per annum, remained outside of this combination.

At the beginning of the year large stocks had been accumulated from former production, which weighed heavily on the market. Besides, consumption was not brisk, and export, on account of the lower prices in Europe, not feasible: thus the combination determined on the policy of closing down a number of the newly acquired works and concentrating the smelting to others in order to reduce expenses. This policy would necessarily have had the effect of relieving the market (which would doubtless have righted itself before long) of the large stocks, but for this the new combine would not wait, and at once exercised its newly acquired power and drove prices up very quickly, which procedure was not at all to the liking of the consumers, who from that time on become rather indifferent, as they could always supply themselves, to a fair extent, from the independent smelters; besides, during the spring and summer months galvanizing trade fell off to an alarming extent, and consumption was poorer than for a long time past. Thus, in spite of the heavily reduced production, stocks did not decrease in due proportion, and this led to quite a considerable fall in prices.

While early in January 3·50c. St. Louis was about the highest price obtainable, the market soon hardened when it became known that a new company was being formed, and about the end of the month 3·75c. St. Louis had been reached, which advance made further progress during February and March, when 4c. St. Louis and 4·25c. New York were established. By the end of April, signs of weakness began to appear; more furnaces had to be closed down, and at the beginning of May 3·75c. St. Louis and 4c. New York were again the outside figures, and during that and the next two months a very irregular and flat tendency prevailed.

In the meantime, the expansion of trade in Europe and the large demand for galvanized iron from the East had brought about a considerable advance in prices on the other side, so much so that the time was drawing near when it was likely that American spelter could be exported. To do this, however, prices here had to come down to a still lower level, and as consumption during July and August was really very poor, prices fell slowly, and at the beginning of September 3·25 to 3·30c. St. Louis was accepted, and then heavy sales were made for export, partly for immediate delivery and partly for delivery up to the end of the year. In all, from 6,000 to 7,000 tons were thus marketed abroad. This enabled the holders to at last clear out the long-accumulated stocks, and spelter could again improve on its own merits, so that by the beginning of October 3·50c. St. Louis was freely paid.

During October, home consumption became decidedly better, followed by such a large demand immediately after the general election had been settled, that it was hardly possible to ship out the spelter quickly enough. Stocks were depleted, a great many furnaces were idle, and during the scramble for spelter, for immediate shipment, prices shot up very quickly, and 4c. St. Louis was again reached, a figure considerably above the parity of values abroad. Part of the spelter contracted for export and which had not been shipped, was then bought back; one after another of the furnaces was lighted so that very soon the scarcity passed away, and with trade becoming very much quieter toward the end of November, the market suddenly became quite flat. At the end of that month 3⅞c. was accepted, followed in December by a further decline, and by the end of the month, 3⅝c. St. Louis and 4c. New York were the ruling prices.

Average Monthly Prices of Spelter

In New York, for the years 1896, 1895, 1894, 1893, 1892; in cents per pound:

Month.	1896.	1895.	1894.	1893.	1892.
Spelter:					
January	3·75	3·28	3·56	4·39	4·69
February	4·03	3·20	3·85	4·39	4·69
March	4·20	3·23	3·89	4·28	4·89
April	4·09	3·30	3·62	4·38	4·68
May	3·98	3·50	3·47	4·41	4·79
June	4·10	3·65	3·40	4·27	4·71
July	3·97	3·75	3·43	4·13	4·78
August	3·76	4·15	3·38	3·89	4·69
September	3·60	4·30	3·44	3 69	4·53
October	3·72	4·10	3·45	3·68	4·41
November	3·99	3·55	3·36	3·65	4·47
December	4·14	3·49	3·43	3·80	4·40
Year	3·94	3·53	3·52	4·08	4·63

Prices of ore from September on, or rather from the time when trade improved, were driven up very fast, and again the old complaints were heard that the smelting of zinc ores is unprofitable. Nevertheless, new producers have already entered the field, as new works have been built in Iola, Nevada and Upland, and already rumors are current that one or two more will soon start.

While home consumption has during the year been very unsatisfactory, it is likely to become very much better next year, and if prices abroad keep up to their present level or go a little higher, there may again come a time when exports may be resumed. On the other hand, a not inconsiderable increase in the production during the coming year may be looked for.

THE ORE MARKET OF THE JOPLIN DISTRICT IN 1896.

BY OUR SPECIAL CORRESPONDENT.

Zinc Blende.—The conditions prevalent in the ore market in Joplin during the year 1896 seem to indicate that the price of zinc blende does not altogether depend on the quoted price of spelter in St. Louis, which is supposed to govern the prices in this market, but depends rather on the law of supply and demand. At various times during the year the price paid for the best grade of zinc blende has been much below what it should have been, judged by its assay value based on the quoted price of spelter in St. Louis; and it is noticeable that this has occurred when the surplus ore on hand was a temptation to buyers to hammer down prices. At other times, when the supply of high-grade ore was short, the competition among buyers has sent the price up for a longer or shorter period to a point higher than the price of spelter would justify on an assay valuation. The operators of the district have learned a valuable lesson from the fluctuations of the market during the past four years, and a marked falling off in the production has this year generally followed any noticeable cut in prices, so that at no time has a surplus accumulated of sufficient size to force down prices to the point at which large quantities were sold in the years 1893, 1894 and 1895.

The year was generally favorable for mining operations, with the exception of the month of May, when a succession of heavy rains flooded many of the big producing mines in the district and caused a suspension of work for some weeks. The Center Creek mines at Webb City, which for years had produced more zinc ore than any other mines in the district, were the heaviest sufferers. These mines have produced during their history as much as 1,000 tons of ore per week, but for a short time their production was entirely cut off and it was not until October 1st that the ground was thoroughly drained so that operations on a large scale could be resumed.

Taken altogether the season has been a fairly prosperous one and the output of zinc ore has been increased to the extent of 17,190,030 lbs., the total production for the year having been reported as 306,164,640 lbs. These figures represent the actual sales reported by the ore buyers and have been verified wherever possible from the books of the companies operating the mines. The greater part of this increase is due to the opening of new mines at Galena, Kan., in and around Joplin and also at the other camps in the district. Galena has been particularly fortunate in the discovery of large bodies of high-grade ore on the North Empire Company's lease and on the DeGraff Brothers' lease about a mile north of the city, while the developments inside and adjoining the city limits have been equally great.

Among the big tracts to be opened in Joplin are the 700 acres of the old Oswego Mining Company. The company was in the hands of a receiver for a year, but its affairs were finally settled this year and the land and machinery were sold to St. Louis capitalists who organized a company to operate the land, which is known as the Bankers' Land and Mining Company.

The Joplin City Mining Company has opened up and drained the O'Keefe land south of the Bankers'. The Bunker Mining Company has opened up and drained the Cottonwood Hollow lease and is taking out large quantities of zinc ore. At Lone Elm, where operations had been suspended for years, a tract of 120 acres has been reopened by E. N. Perry, an operator of large experience, who has put in the heaviest and most costly pumping plant in the entire district, and has completely drained the ground and opened up the rich ore bodies formerly worked.

The year has also been marked by new developments at Aurora, Alba, Duenweg, Stotts City, Oronogo and Carterville, and large tracts have been opened at Midway, between Webb City and Joplin, by Col. T. J. Steers, who now owns some of the best producing mines in the district. Other tracts have been opened by the Free Coinage Company, which is making over three carloads of zinc ore weekly, and by the Central Company, which is making over two carloads weekly. At the close of the year there is little or no surplus ore on hand, and there is a marked improvement in the situation over the opening of the year when there was a surplus estimated at 2,000 tons, with a decreasing demand. During the year Vivian & Sons, of Swansea, Wales, had an agent in the field purchasing ore, but the attempt to export the ore did not prove very successful and only about fifteen cars were purchased for shipment.

The Cherokee-Lanyon Spelter Company was enabled to relieve the congested condition of the ore market during June, July and August by the purchase of large quantities of ore in consequence of a contract made by them for 500 carloads of spelter which they shipped to Liverpool, England. W. & J. Lang also shipped 1[illegible] cars to Havre, France.

The ore market commenced to move upward during September and the price has advanced steadily and slowly to the present time. The average price paid during the year for zinc ore was as follows:

Month.	Per ton.	Month.	Per ton.
January	$24.00	July	$21.50
February	23.50	August	21.00
March	23.00	September	20.00
April	23.00	October	20.50
May	21.50	November	23.50
June	21.00	December	25.50

The combined value of the lead and zinc ore sold during the year

was $3,814,732, against $3,917,929 for the year 1895, but the falling off in the sum total was due to the low price and the lighter production of lead.

Lead Ores.—Lead mining in this district is governed by the same conditions that rule in regard to zinc mining, as in most cases the same ground produces both ores. This year, however, the pig lead market has been in so unsettled a condition that prices have been extremely unsatisfactory for ores and sales have been light; while there is at the present time a surplus on hand of about 2,000,000 lbs.

The output of lead this year was 53,853,920 lbs. as against 62,587,470 lbs. for the year 1895. The falling-off in the productions to the extent of 8,733,550 lbs. is due to the low price and the lack of prospect work which would have been carried on in a fairly prosperous year.

Joplin has an excellent local market for lead. The Picher Lead Company, whose works are very extensive, and which makes white lead as well as pig lead, and the Case & Serge Smelting Works at Grand Falls, about five miles from the city, consume large quantities of ore. A good deal is also shipped to Colorado for fluxing silver ores.

The average price for the year was $16.04 per thousand pounds and the average monthly prices were as follows:

Month.	Per 1,000 lbs.	Month.	Per 1,000 lbs.
January	$17.75	July	$16.00
February	17 50	August	14 75
March	17.25	Spetember	14.00
April	16.50	October	14.25
May	16.50	November	15.00
June	16.50	December	16.50

The total output for the district, which has its center at Joplin, has been as follows for two years, in pounds:

	1895.	1896.	Changes.
Zinc ores	288,974,610	306,164,640	Inc. 17,190,030
Lead ores	62,587,470	53,853,920	Dec. 8,733,550

The total market value or selling price of these ores in 1895 was $3,917,929, and in 1896 it was $3,814,732: showing a decrease of $103,197 for the year just closed.

COAL IN 1896.

The production of coal in the United States in 1896 will be found on another page. In the following columns the conditions of the great anthracite trade and of the more important local markets are very fully treated.

THE ANTHRACITE COAL TRADE IN 1896.

The opening of the past year found the anthracite coal trade in a condition that in many respects can be characterized as desperate. The year preceding had been one of trials and tribulations, which, however bitter, were of benefit to the producing interests in at least one particular—they furnished experience that indicated the necessity of radical changes in the manner of conducting business affairs. Though experienced men had been at the helm and wise leaders had given directions that, if properly obeyed, would have averted much of the disaster that did occur, the danger of total annihilation was imminent at the opening of the year 1896. The trade was beset with undercurrents and false trade winds that carried the ship and its crew in every direction but that in which they desired to go, yet they were compelled to drift, because they had themselves launched their craft upon this sea of trouble.

Put in a nutshell, there are two stubborn conditions which have done more to demoralize the anthracite coal business than all the other conditions combined. These two are (1) a limited market and (2) a practically unlimited ability to produce.

Like all new materials put upon the market, anthracite coal in its early days had to win its way into the class of commodities which, once used, are used again, and which are first desirable, then needful, and finally indispensable. Anthracite coal in this way came to be looked upon as an absolute necessity which nothing else would be able to supplant. As in many another instance, this sense of security was destined to be rudely shaken. Bituminous coal came to share the field and strive with anthracite for a part of the patronage the latter was enjoying. From the very start bituminous coal had an advantage in its abundance and lower cost of production, and in many cases was on an equal footing with anthracite in the efficiency of results obtained from its use. Mechanical improvements and the gradual perfection of processes in the arts naturally tended to widen the possibilities of the cheaper and more abundant fuel at the expense of the dearer one. Not only, therefore, did anthracite coal fail to win its way further into the essential needs of the times, but it was supplanted by bituminous coal where before it had enjoyed an exclusive monopoly. We hear anthracite coal spoken of as a domestic fuel, and this is the field which competition with bituminous coal has forced it largely to occupy to-day, its use as a steam coal having very greatly decreased. So much, briefly, on the question of limited market.

There has never yet been a field which offered good returns for those who were at work in it, but that they were joined by others who desired to share the profits. And it might be added that this never has been the case without resulting in an overcrowding of the field. This has been the experience of the anthracite coal market, into which new producers have continually found their way. The increase in numbers, however, is not so important a factor in this instance as the ability to produce among those already in the field. Mechanical genius not only served to increase the use of bituminous coal at the expense of anthracite, but it was busy devising apparatus by which the output of the collieries could be greatly increased. Ten years ago an anthracite breaker that could in one day prepare 1,000 tons of coal for market was considered a wonder. To-day, such a capacity is remarkable for its smallness, for we have breakers that can without difficulty prepare 1,500, 2,000 and even 2,500 tons of coal in a day of 10 hours. The total output, however, has not increased in the same proportion, for in 1885 the total tonnage was 31,750,546 tons, while 10 years later, in 1895, it was 46,545,760 tons. And it must be remembered that the latter tonnage was reached when the market was in an exceedingly sluggish condition. Coal went begging, had to be disposed of at a sacrifice, and the mines were kept working but little better than half time.

The advent of 1896 found the anthracite coal interest fully cognizant of their shortcomings during the year just closed, and equally conscious of the fact that "little market" and "much coal" was at the bottom of it all. The question was: "What shall be done to improve matters?" The answer they gave is found in the following brief summary of the year's events:

The Market During 1896.—January opened with such dull market conditions that prices had a tendency to decline. Orders were few in number and small in size, and quotations for the various sizes were: $3.35 to $3.40 for stove, $3.10 to $3.20 for egg and chestnut, and $2.90 to $3.00 for broken, all net on board. Although rumors were abroad that a meeting of presidents was to be held to outline a policy for the year, such rumors were denied by various officials of the producing companies. So far as the public knew, the go-as-you-please methods of carrying on the trade were to be continued. The middle of the month found the demands from buyers as poor, and even worse, than at the beginning, with the result that prices were 10c. to 15c. lower per ton. Just as this time came the first ripple of excitement in the trade. Presidents Samuel Sloan, of the Delaware, Lackawanna & Western; J. Rogers Maxwell, of the Central Railroad of New Jersey, and E. P. Wilbur, of the Lehigh Valley, issued a call to the other coal-carrying roads for a conference to discuss the condition of the coal trade and arrange for a restoration of prices. This announcement had little effect upon the volume of business transacted during the week following its publication, buyers apparently being confident that no immediate change would occur to increase prices. Quotations at the end of the week proved the correctness of their belief. At the meeting of the presidents above mentioned, it was decided to "allot" to each producing company a certain proportion of the entire output, but when it came to determine these proportions upon the output figures of 1895, there was a disagreement, it being claimed by some that their 1895 figures did not fairly represent their capacity. It was decided to appoint a new committee, consisting of President J. Rodgers Maxwell, of the Jersey Central; President E. B. Thomas, of the Erie, and Vice-President E. R. Holden of the Delaware, Lackawanna & Western, to recommend new percentages and other plans to improve trade for the sellers. One week before the close of the month the *Engineering and Mining Journal* gave warning of the increase in coal prices that was to take place so soon, and advised buyers to place their orders at once. Up to two days before the close of the month the following were the ruling prices for coal: Stove, $3.20 to $3.25; egg, $2.95 to $3; chestnut, $2.85 to $2.95; broken, $2.75, all net on board. On January 30th the presidents of the coal-carrying companies held a meeting at which the report of the previously appointed committee of three was submitted, and adopted. The various companies were allotted the following percentages of the total output:

	Per cent.
Philadelphia & Reading	20·50
Lehigh Valley	15·65
Delaware, Lackawanna & Western	13·35
New Jersey Central	11·70
Pennsylvania Railroad	11·40
Delaware & Hudson	9·60
Erie	4·00
Pennsylvania Coal Company	4·00
Coxe Brothers & Company	3·50
New York, Susquehanna & Western	3·20
New York, Ontario & Western	3·10
Total	100·00

In addition to agreeing upon percentages for 1896, a standing committee of five, consisting of Presidents Maxwell, of the Jersey Central; Harris, of the Philadelphia & Reading; Wilbur, of the Lehigh Valley; Thomas, of the Erie, and Walters, of the Delaware, Susquehanna & Schuylkill, was appointed to formulate a plan for carrying the anthracite coal under a plan similar to that adopted for the freight traffic of the Trunk Line Association. On January 31st the sales agents, acting under instructions from the Presidents, held a meeting and decided on the following tide-water prices: Stove, $3.60; egg and chestnut, $3.35; broken, $3.10—an advance of 35c. to 40c. per ton.

February opened with absolutely no new business doing, purchasers being dazed at the action just taken by the coal-producing companies. In addition the weather was extremely mild, which in itself would have made a slow market. The output for the month had been fixed at 2,500,000 tons, a remarkable restriction considering that between 4,000,000 and 5,000,000 tons had been mined the previous month. The sales agents sat quietly by waiting for orders, but no inducements were considered looking toward the shading of prices below the circular. A few of the individual operators, however, accepted orders at figures 15c. to 20c. below the circular, because, as they said, they had not sold as far ahead at the old rates as the large companies did. As the month advanced business did not increase very materially, but the market acquired an air of firmness that had been unknown to it before. About the middle of February colder weather prevailed for a time, and though it did not last long enough to create new business, it did influence the market so that firmer conditions resulted. This was in part also produced by the general observance of the agreement to restrict the output to 2,500,000 tons. The month ended with mild weather, and dealers continuing to hold off from purchasing, in the hope that conditions would take a turn more favorable to them. On what little business was done the circular prices were pretty freely obtained, and the indications for the future seemed quite promising.

During March the trade conditions settled into a state of quietude that remained unbroken throughout the month. The first difference of opinion was noticeable at the beginning of the month among the various interests since the "understanding" was reached, but it was of only slight moment. It was on the question of output; the figures given by different sales agents did not agree. Later developments showed that this matter was properly taken care of, the restriction being guided by the market requirements. In this way, stocks of coal in hand were not increased, but, on the contrary, some companies materially reduced theirs. Sales were reported rather small, but on all of them the circular prices were said to be realized.

April conditions of the trade differed but little from those existing during March. Business was not large, but prices were firm. Public opinion

and the passage of the Robbins Anti-Coal Trust Bill put an end to the meetings of sales-agents to recommend restrictions and make other suggestions. Opinions, informally expressed, placed the probable output for the month at 3,000,000 tons. All matters of this sort were from this time forward reported as having been arrived at through "informal talks" that naturally took place between the heads of the interests involved. A week before the close of the month rumors were general that prices were to be advanced on May 1st, the representatives generally expressing themselves in favor of such a step.

May saw the anticipated advances in the schedule of prices, the circular generally taking effect upon the opening day (the Philadelphia & Reading circular was issued April 27th). The advance was 25c. per ton on all prepared sizes, which made the cost of stove coal $4, egg and chestnut $3.75, and broken $3.50 per ton. This action was, of course, followed by a dearth of orders, shipments being mostly on orders placed during the previous month. By the end of May it was reported that good companies were able to buy at a net circular rate of $3.85 for stove, $3.60 for egg and chestnut, and $3.35 for broken, all net on board, the full rates obtaining only on small orders. The production for the month was 3,125,170 long tons.

In June a new element came into the anthracite coal trade, to further depress general conditions, in the shape of the political question. Business was rather quiet during the entire time, and the only point of special interest was the rumor of another advance on July 1st. This was announced by the Philadelphia & Reading Company on June 24th. The circular rates then became: Stove, $4.25; egg and chestnut, $4, and broken, $3.75. The tonnage for the month was 3,314,196 tons.

July and August were months of mid-summer quietude, in which both producer and retailer were as inactive as they well could be without going out of business entirely. The consumption of coal for all purposes fell off very much, which kept the distributing end of the business from warming up over its work, while the prospective 25c. advance, which the producing interests still had up their sleeves, together with the unkind reception which they knew from past experience it would receive, made them very wary, not to speak of the assistance given by the August weather. Each month, however, the output increased a "cool" quarter million tons, at a time when market conditions warranted a decrease of fully that amount.

September opened with another new circular, prices having been advanced 25c. a ton on all domestic sizes, becoming $4.50 for stove, $4.25 for egg and chestnut and $4 for broken. A more active business was reported at this time, principally on orders that had been placed at the July circular of prices before the end of August. With these filled, a reaction set in, and the rest of the month was very quiet. About this time it became generally known that the circular prices were not being realized, and had not been at any previous time as fully and as promptly as the public had been led to suppose. Concessions of all kinds were made to effect sales, and the "understanding" that had been governing the trade since February had developed into a "misunderstanding." In the meantime the production still tended upward, the September output reaching, in round numbers, 3,750,000 tons.

October and November conditions, in the main, were a continuation of those in September. The usual fall trade did not materialize because the weather remained uniformly mild and because business was generally depressed. Regardless of these unfavorable circumstances, the output for each month approximated 4,500,000 tons, which amount was fully 1,000,000 tons above what it was to the interest of the producers to mine. No wonder the circular prices could not be obtained, and the trade developed into a condition that was characterized by one of the sales agents as "very discouraging."

General Observations.—The year, as a whole, can without fear of contradiction be put down as an improvement over 1895. There was more method in the conduct of affairs, which, in turn, resulted in better prices and, though the total output for the year fell short of the 1895 output by about 3,000,000 tons, the gross receipts resulted in greater net earnings. The "understanding" that the producers arrived at in February promised better things than were fulfilled later in the year, yet this was not altogether the fault of the "understanding." So far as we can learn, however, the May, July and September circulars were decided upon at the February meeting and carried out according to programme, when it must have been suggested to most minds that it would have been better to postpone the July circular to September and omit the September circular entirely. The practical results that were obtained by the changes as made did not even equal those that would have been required by the modified schedule as suggested. The latter would have been better, as it would not have shown the weakness of the "understanding," which weakness was made only too apparent by the failure of the prearranged plans.

The matter of tonnages also does not seem to have been regulated with proper judgment. But this feature of the business had in the past been always so grossly in error that it is not to be wondered at that the reforms that were instituted were not carried out entirely. When the figures for the first six months of 1896 showed a decrease in the output of more than 1¾ million tons compared with 1895, the restraint apparently could no longer be borne, and the dull summer season saw the tonnage steadily increase a quarter million tons each month. But, worst of all, the fall trade, on which the fondest hopes of the year had been based as the time when past shortcomings could be equalized, proved little better than the summer had been. Instead of meeting these conditions with a limited output, the attempt was made to "compel the horse to drink," and the market was given a quantity of coal far in excess of all requirements. Without doubt it was one of the greatest errors of the year, and at this writing the disastrous effects have hardly begun to disappear.

In a word, the conditions of the trade are not materially changed and have been those which the past would lead us to expect. What these are can be understood by a careful reading of the article on the "Evolution of the Anthracite Coal Trade" in Vol. IV. of *The Mineral Industry.*

Production.—The mistaken and almost childish policy of the companies in stopping the publication of the figures for shipments and production prevents us from giving the shipments of the different companies, and also from giving the actual shipments by months. From undoubted authority, however we have learned that the total shipments for 1896 may be given at 43,365,000 tons. These figures compare with the shipments of the previous five years as follows: 46,545,670 tons in 1895, 41,391 199 tons in 1894, 43,089,536 tons in 1893, 41,894,316 tons in 1892 and 40,448,336 tons in 1891.

As it is customary to add 6% to the shipments for coal consumed at and about the mines, the production of anthracite coal in Pennsylvania in 1896 may therefore be estimated at 45,866,900 long tons.

THE COAL TRADE OF BUFFALO FOR 1896.

BY OUR SPECIAL CORRESPONDENT.

The anthracite coal trade of Buffalo for 1896 was without any particular features of importance. Prices advanced 60c. from opening quotations to the close at wholesale per gross ton, and 25c. at retail per net ton delivered. The receipts by railroads for the year fell off about 200,000 net tons, and the shipments by lake 220,700 net tons. The movement by canal eastward and westward was very light. Lake freights on coal fluctuated from 20c. to 60c. to Chicago and Milwaukee, and from 20c. to 50c. to Duluth and Lake Superior ports; the average rate to Chicago was 39c.; to Milwaukee 37c. and to Duluth 27c. per net ton free on and off. Trade was only moderate all the year, as so many citizens use natural gas for fuel, and the range of temperature during the winter months was comparatively high.

There was more or less trouble during the year in consequence of dealers cutting prices, in spite of the efforts of the Coal Exchange to prevent it. However, trade was done at a profit—an improvement over 1895 in this respect.

The use of electricity lessened materially the consumption of illuminating gas. At the beginning of December 1,000 H. P. of electricity was received daily from Niagara Falls, the precursor of a supply of many thousand horse-power next year.

The bituminous coal trade was of only moderate volume, as the consumptive demand was smaller for manufacturing and vessels' use; the supply during the year was plentiful and the assortment good. Railroad companies reaped the benefit of higher freight rates, but operators, dealers and consumers were not benefited to any extent. Why the special low rate to Canada (15c. less than to Buffalo) was made and put in force was a conundrum to the trade. No labor disturbances of any consequence interfered with the trade in 1896 as far as Buffalo was concerned, and the supply of cars was fully adequate to the requirements of business. Stocks at close only moderate on railroad sidings and coal on the docks about all cleared up on the close of navigation. Standard brands of Pittsburg coal sold as low as inferior brands from other districts many times during the year.

The coke trade was quiet early in the year, but improved materially the latter half.

It may not be generally known, but the retail coal dealers of Buffalo draw their supplies direct from the companies' trestles, thereby saving the expense of keeping yards. The dealers do their own carting.

Natural gas is still extensively used for fuel purposes; the supply is mainly piped from Canada and Pennsylvania, with many small wells within 10 miles of Buffalo. This accounts for the decreased consumption of coal for several years which should have increased according to the increase in population.

Fifty-four years have passed since the first record was made of the receipts of anthracite coal at Buffalo. In 1842 only 900 net tons were reported; in 1852, 23,000 net tons; in 1862, 132,500 net tons; in 1872, 521,000 net tons; in 1892, 4,804,700 net tons. Before 1882 statistics of the bituminous receipts are missing, but in that year only 65,000 net tons were received by railroads and lake; 10 years after, viz., 1892, 2,280,470 net tons were reported. This and preceding years' figures of anthracite and bituminous coal are given below.

The following statistics collected by Mr. William Thurstone, Secretary of the Buffalo Merchants' Exchange, shows the coal trade of that port for five years:

COAL TRADE AT BUFFALO DURING 1896.

	1892.	1893.	1894.	1895.	1896.
Receipts—					
Anthracite, canal	54,760	70,546	42,130	14,038	38,061
Anthracite, rail	4,750,000	4,700,000	4,230,000	4,750,000	4,550,000
Bituminous, lake	.....	.....	.....	240	.....
Bituminous, rail	2,627,441	2,896,614	2,280,470	2,727,308	2,500,000
Blossburg, rail	25,000	25,000	25,000	25,000	25,000
Shipments—					
Anthracite, canal	.....	.....	.....	1,376	1,104
Bituminous, canal	29,216	19,336	8,840	4,259	956
Anthracite, lake	2,822,330	2,681,173	2,475,255	2,612,768	2,391,568
Blossburg, lake	5,000	7,500	7,500	6,000	6,000
Bituminous, lake	25,000	15,000	2,500	2,000	2,500

On bituminous coal the range of prices during 1896 purchased by gas works, manufacturers, propeller lines, tugs, etc., in car lots, was from $1.90 to $2.35 for gas, $1.50 to $1.75 for run of mine, $1.70 to $1.85 for lump, $1.20 to $1.35 for slack and $1.80 to $1.90 for lump per net ton on track. At retail for family use the prices were from $4 to $5.50 per net ton delivered within city limits. The closing prices of Briar Hill lump at wholesale was $3 25; No. 1, Falling Rock cannel at wholesale $5.25 and other cannels $3.75 per net ton in car lots on track. Coke was quoted for the last six months of the year at $4 for Connellsville and $2.65 for Reynoldsville per net ton in car lots on track.

Lake freights on coal opened for the season at 40c. per net ton Buffalo to Chicago; advanced for week ending May 16th to 50c.; at the end of May 60c. was obtained, but at the end of week of June 13th, freight declined to 50c.; from the first week in July to the 15th 40c. was the price and the rest of the month only 30c; from the beginning of August to the middle of October 20c. was the ruling rate; for four weeks following 30c. was paid; then 40c. for one week and from end of November to the close 60c. From opening to about middle of July freights to Milwaukee were 5c. less than Chicago rates, after that date the same as Chicago. Duluth and Lake Superior rates opened at 25c.; advanced beginning of June to 30c.; declined first week in July to 25c. and continued at that rate to middle of August, from which date 20c. only was paid until after middle of November, then 50c. Toledo freight varied from 20c., 25c., 30c., for the

season. Navigation was, on December 15th, still open at Buffalo, but closed a few days later. The length of the season this year about the same as of 1894 and 1895.

The anthracite coal brought to Buffalo comes by five lines of railroads, the Delaware, Lackawanna & Western brings 25%; the Erie, 23%; New York Central, 18%; Lehigh Valley, 23%; Western New York & Pennsylvania, 9%.

There are seven shipping docks and coal pockets at the port of Buffalo; total average shipping capacity, daily, 27,500 tons; the average capacity of the pockets, daily, 36,800 tons. Outside the city limits at Cheektowaga is the stocking coal trestle of the Delaware, Lackawanna & Western, with a capacity of over 100,000 tons storage. At the same place the Lehigh Valley has its trestles and stocking plant of 175,000 tons storage capacity, with a shipping capacity of 3,000 tons daily; and has a transfer trestle for loading box cars, with a capacity of 100 cars daily. And at the same point the Erie has a stocking plant, with average daily capacity of 1,000 tons, and storage capacity of 100,000 tons. The Reading has in the city a large trestle and pocket for the convenience of the retail trade,

LIST OF PRICES OF ANTHRACITE COAL AT BUFFALO IN 1896.

Date.	Per Long Ton, f. o. b. Buffalo.		Per Long Ton, on Cars at Buffalo or Suspension Bridge.		Per Short Ton, at Retail in City Limits.			
	Grate.	Stove, Egg and Chestnut.	Grate.	Stove, Egg and Chestnut.	Grate.	Stove, Egg and Chestnut.	Pea.	Blossburg.
January 1.....	$4.45	$4.70	$4.15	$4.40	$4.75	$5.00	$3.75	$4.00
June 1.....	4.55	4.80	4.25	4.50	.....	.....	.....	.....
July 1.....	4.80	5.05	4.50	4.75	.....	.....	.....	.....
Sept. 1 to close.....	5.05	5.30	4.75	5.00	5.00	5.25	4.00	4.00

and in connection with their docks, with a capacity of 2,000 tons. The Buffalo, Rochester & Pittsburg has terminals fronting on the Blackwell Canal, with a water frontage of 1,100 ft.; also a town delivery yard, with a hoisting plant for loading and coaling vessels, used by Coxe Bros. & Company.

The principal ports of destination received from Buffalo in 1896 the following quantities by lake: Chicago, 1,005,000 net tons; Milwaukee, 648,000 net tons; Duluth, 232,000 net tons; Toledo, 88,100 net tons; Manitowoc, 36,500 net tons; Gladstone, 30,000 net tons; Ashland, 11,000 net tons; Superior, 192,000 net tons; Marquette, 13,500 net tons; Fort William, 12,500 net tons; Lake Linden, 12,000 net tons; Racine, 24,000 net tons; Green Bay, 26,000 net tons; Kenosha, 9,000 net tons; Bay City, 15,000 net tons; Saginaw, 13,500 net tons; Detroit, 3,150 net tons; Hancock, 5,200 net ton; Marinette, 1,750 net tons; Washburn, 3,500 net tons; Michigan City, 2,200 net tons; Port Arthur, 2,100 net tons; Menominee, 2,100 net tons; Canadian ports, 6,000 net tons; Sheboygan, 1,250 net tons; Benton Harbor, 1,200 net tons; Portage, 1,100 net tons, and Port Huron, 1,150 net tons.

THE CHICAGO COAL MARKET IN 1896.

Anthracite.—There is nothing to be said in favor of the anthracite coal trade at Chicago during the year 1896. From the very beginning of the year to its end, not one real staying boom made its appearance, and the buying of coal was wholly in accordance with the weather. There were weeks of very cold weather in which considerable coal was placed, but when the cold subsided the market conditions became exceedingly quiet. Shipments to out-of-town places ran a great deal below the average, and it is evident that country dealers carried stocks greatly below their usual limit. The amount of hard coal shipped to this city decreased much over the preceding year, through the action of the coal agents in limiting output of mines. There was, however, a great plenty of coal on the docks, railroads, etc., of the city during the entire year, but the limited receipts reduced much the question of demurrage, that was one of the features of 1895. The railroads running north and west from Chicago contended for the privilege of carrying the limited amount of hard coal to points on their lines, and consequently most of the year there was cutting of rates, which finally resulted in a rate of $1 per ton to Missouri River points. This rate did not hold very long, however, for the roads found it a losing venture and it was soon back to about $2.50 per ton, where it has been since. The shipments of hard coal from Buffalo to Chicago by lake foot up about 960,000 tons, an increase of 20,000 tons over the shipments of 1895. The amount of coal shipped from Buffalo in 1895 to Chicago by water would undoubtedly have been more than 1896 had it not been for the scarcity of boats, the greater inducements offered in carrying iron ore having made big inroads on the usual coal-carrying fleet. During the opening months of the year hard coal prices were greatly demoralized, and to obtain business it is known that $4.25 was quoted. Circular rates in January were in the neighborhood of $5 per ton, but for a number of months there were no authorized rates noticed, and in consequence there was a go-as-you-please game. May circular prices were placed at $5 to $5.25; prices advanced in June to $5.10 to $5.35. August circular rates increased to $5.35 to $5.60, and in September they took another jump to $5.60 to $5.75, at which figures they stopped for the remainder of the year. The retail price since then has been $6 50 to $7. This high price, it is well understood, has been the cause of a greatly decreased business, and nowhere has it been felt more than among the retailers. The industrial conditions during the year were sadly against the increased cost of anthracite coal.

Bituminous.—The bituminous coal trade at this point was very poor for the first six months of the year, but through the advance in hard coal prices the latter six months showed a considerable increase in volume of sales. There has been a large consumption of soft coal by those who have heretofore used hard, the increased cost of anthracite driving them to the use of soft coal. The saving in cost has been so large as to lead consumers to put up with the disagreeable features of soft coal. The manufacturing industries have been buying almost entirely on the hand-to-mouth policy and but few important contracts were booked the entire year. A very large amount of soft coal has been shipped to this market and prices were, consequent to the poor trade, very much off. Not once during the 12 months of the year has there been any real steadiness in them, though toward the end of the year there were signs that indicated firmness. The better grades of soft coal have come to the front largely during the year. Some of the closing prices of the year on bituminous coal are: Pittsburg, $2.90 to $3.15; Raymond, $3; Wellston, $3; Indiana Block, $2.05; Hocking Valley, $2.60; Youghiogheny, $2.85; Blossburg, $3.65; Piedmont, $3.15 per ton.

THE PITTSBURG COAL SHIPMENTS BY RIVER IN 1896.

BY OUR SPECIAL CORRESPONDENT.

The Pittsburg coal shipments by river are something very uncertain, having to depend on the stage of water and the weather, which all persons know is not very reliable. We have known of coal shipments every month in the year; this is something very rare and does not happen often. Again there have been years in which there were shipments in May and no others until December 25th; this created a famine in the lower markets. Coal sold at Cincinnati at 30c. to 35c. per bushel; fortunes were made by some and lost by others. A public meeting was called at Pittsburg and passenger cars pressed into service and coal shipped to Cincinnati. Of course nothing like this can ever take place again; in those days people of the lower cities had to depend on the Ohio River entirely for their supply. When the locks and dams are completed between Pittsburg and Cincinnati coal can then be shipped all the year, except when ice interferes. The largest coal run ever made was in 1888, when 109,902 000 bu. left Pittsburg; the smallest run in 16 years was in 1895, when the shipments reached only 59,212,000 bu. This shows what can be done in the way of carrying coal by water. The present year has not been a favorable one for the coal interest; the shipments have been liberal, but low prices have prevailed in Western and Southern markets. The entire year coal sold in Cincinnati as low as 4⅝c. to 5½c. per bushel; these are ruinous figures, but were the best that could be obtained. A large supply of Alabama coal is now furnished to the Southern markets; while it is said to be very much inferior to the Pittsburg article, as it is sold cheaper consumers make it answer. It thus takes the place of the Pittsburg article to a certain extent.

The following table shows the shipments of coal from Pittsburg by river for 14 years in tons of 2,000 lbs.:

SHIPMENTS OF COAL FROM PITTSBURG BY THE OHIO RIVER.

Year.	Cincinnati.	Louisville.	Total.	Year.	Cincinnati.	Louisville.	Total.
	Tons.	Tons.	Tons.		Tons.	Tons.	Tons
1883....	1,261,320	2,258,480	3,519,800	1890....	1,301,640	2,042,160	3,346,800
1884....	985,240	1,232,040	2,217,280	1891....	1,125,000	1,931,600	3,056,600
1885....	1,303,600	1,693,360	2,996,960	1892....	973,560	1,519,960	2,493,520
1886....	1,329,160	1,537,406	2,866,566	1893....	879,950	1,617,840	2,497,790
1887....	830,800	1,438,920	2,269,720	1894....	1,139,920	1,383,280	2,523,200
1888....	2,053,560	2,340,520	4,394,080	1895....	984,400	1,384,080	2,368,480
1889....	1,214,400	1,515,800	2,730,200	1896....	2,029,760	2,578,120	4,607,880

The total in 1896 was the highest reached in any of the 14 years, as that for 1895 was the lowest, with the exception of the dry years 1884 and 1887. The total increase in 1896 over 1895 was 2,279,400 tons, or 96·2%. As compared with 1888, the second best year recorded, the increase shown was 213,800 tons, or 4·8%. It is not probable that the river trade will ever exceed this maximum: most probably it will never reach so high a point again, if we consider the competition Pittsburg must meet from the mines of Kentucky, West Virginia and Alabama.

THE NEW YORK CHEMICAL MARKET DURING 1896.

Heavy Chemicals.—The heavy chemical market during 1896 was a rather uneventful one. This was due mainly to the harmony which exists among the various producers, and to the dullness in trade that affected every line of business during the greater part of the time. This dullness influenced the course of prices rather than the amounts consumed, which in most cases exceeded the imports during 1895. In two notable instances, however, the imports decreased very much, owing to the supply manufactured here at home supplanting the foreign article, which formerly had practically no opposition from domestic manufactures.

Caustic soda was one of these exceptions, the falling off during the first ten months of 1896 from the corresponding period in 1895 being nearly 8,000 tons. In January, the market opened with quotations of 2·25 to 2·37½c., fell slightly by the middle of the month, but regained the first figure by the middle of March. Toward the latter part of April the quotation for smaller shipments reached 2·45c. At the beginning of May the lowest values for the year were obtained, 2⅛ to 2 3/16c., but three weeks later prices had recovered to 2⅛ to 2¼c., which has been held ever since. These figures are for 72, 74 and 76% strengths.

Alkali had rather a quiet time. Quotations at the beginning of January were 80c. to 90c., which were maintained for just one month, when they increased to 85c. to 95c. These prices in turn held until April, when 80c. to 95c. was obtained. Before the end of the month 90c. to $1.15 was asked, which early in May was shaded first to 87½c. to $1.15, and then dropped to 77½c. to 87½c. By the end of the month the figures had changed to 80c. to 95c., the same that they had been just two months previously. Toward the end of July the market stiffened somewhat and 80c. to $1 had to be paid. No further charge was noted until the middle of September, and then the increase was very slight, 82½c. to $1 being asked. The last change of the year occurred during the second week in November when the price fell to 70c. to 90c.

Sal soda again shows a large decrease in the amount of imports, the difference between the first 10 months of 1896 and the same period in 1895 being more than 7,000,000 lbs. The difference is, of course, made up by the production at home. Quotations at the beginning of the year were 65c. to 70c., which in April had fallen to 60c. to 65c. From this time on they varied slightly, and before the middle of June advanced to 67½c. to 70c., which was followed immediately by a further increase to 70c. to 71½c. There was no further change until near the middle of November, when prices fell to 62½c. to 67½c.

The heavy increase in importations of bleaching powder in 1895 over

1894 (about 20%) was not continued in 1896; but, on the contrary, the first 10 months of the year showed a decrease of more than 6,000,000 lbs. from the same period in 1895. This deficiency occurred toward the close of the year, when bleaching powder was scarce for quite some time. October alone showed a decrease of nearly 2,500,000 lbs. from the imports during the same month in 1895. January opened with quotations at $1.85 to $2; they fell to $1.65 to $1.90 by the middle of the month, and recovered to $1.85 to $1.90 by February 1st. Before the middle of March a decline occurred to $1.70 to $1.80, and in another month there was a fall to $1.62½ to $1.75. Toward the end of April prices increased slightly, but May opened with the lowest figures reached during 1896, namely, $1.50 to $1.55. However, they recovered almost immediately to $1.62½ to $1.75, yet declined to $1.50 to $1.75 by the end of May. Early in June $1.87½ to $1.95 was asked; two weeks later this became $1.75 to $1.85, which, with only slight changes, held to the end of the year.

The imports of heavy chemicals into the United States for the 10 months ending October 31st, according to the Bureau of Statistics, were as follows: Soda ash, 144,889,818 lbs. in 1896, against 229,349,774 lbs. in 1895; bleaching powder, 80,123,023 lbs. in 1896, against 86,511,857 lbs. in 1895; caustic soda, 38,655,328 lbs. in 1896, against 54,705,758 lbs. in 1895; sal soda, 12,442,989 lbs. in 1896, against 19,792,659 lbs. in 1895; chlorate of potash, 4,125,243 lbs. in 1896, against 4,016,233 lbs. in 1895; muriate of potash, 59,636,391 lbs. in 1896, against 52,551,196 lbs. in 1895.

Nitrate of Soda.—There was an almost continual variation in the price of nitrate of soda throughout 1896, although the fluctuations were within narrow limits. The year opened with a quotation of 1·72½@1·75c., which fell to 1·70c. by February. With slight changes occasionally, this figure was practically held until the middle of May, when 1·75c. was reached, and 1·80c. by the end of that month. This price remained invariable throughout June (the only month of the year in which there was no change), but fell early in July. By the end of July it more than recovered, 1·80@1·82½c. being realized, but for a short time only. During August the price fell slightly, and early in September reached 1·75c. After this it increased to 1·80c., but again fell to 1·75c. in the early days of October. From this time forward, however, there was a gradual rise, first to 1·80c., and then to 1·82½@1·85c. by the end of October. Soon after the middle of November the quotation was 1·85@1·87½c., and before the middle of December reached the highest mark of the year, namely, 1·92½ 1·95c.

Acids.—During the year 1896 the trade in acids was without special feature, particularly during the first six months. Business during this time was fair and steady, but consisted mainly of deliveries on yearly contracts. There was considerable competition among the dealers for the jobbing trade doing, to secure which prices were more or less shaded. In the spring months business fell off somewhat, but the early summer saw a revival. In June the rise in brimstone was felt in the acid market and dealers endeavored to get an advance of 5c. per hundred pounds of sulphuric acid on all new business. Although the price of brimstone continued to increase for some months, and is even now $6 to $8 per ton higher than at the opening of the year, the quotations on acids have not shown any considerable increase. The effect was mainly to make prices very firm and to materially strengthen the market on current business. On contracts for 1897 it has had the effect of increasing quotations 10c. to 15c. over the 1896 contract prices, but even at this figure producers were not very anxious to enter into agreements early in the fall. Consumers also held off in the hope that conditions later would be more in their favor.

Prices opened in January as follows: Acetic acid, $1.40 to $1.70; muriatic acid, 18°, 75c. to 80c.; 20°, 80c. to 90c.; nitric acid, 36°, $3.50 to $4; 40°, $4 to $4.50; 42°, $4.25 to $4.75; oxalic acid, $7.10 to $7.60; sulphuric acid, 66°, 75c. to 80c.; chamber acid, $6.50 to $7.25. These figures were held until the latter part of April, when a general decline took place, and prices became as follows: Acetic, $1.25 to $1.30; muriatic, 18°, 75c. to 80c.; 20°, 75c. to 80c.; nitric, unchanged; oxalic, $7.25 to $7.50; sulphuric, unchanged; chamber acid, $6 to $6.50. In the beginning of May a further change occurred, in which nitric acid took a tumble, from which it recovered somewhat, however, almost immediately. Prices were: Acetic, $1.25 to $1.60; muriatic, 18°, 65c. to 75c.; 20°, 75c. to 85c.; nitric, 36°, $3.25 to $4.25; 40°, $4 to $4.25; 42°, $4.50 to $5.25; sulphuric, 66°, 75c. to 80c. On July 1st the prices were these: Acetic, $1.25 to $1.40; muriatic, 18°, 75c.; 20°, 75c. to 85c.; nitric, 36°, $3.25 to $4.36; 40°, $4 to $4.50; 42°, $4.50 to $5.50; oxalic, $7.25 to $7.50; sulphuric, 66°, 75c. to 95c.; chamber acid, $6 to $6.50. Since that date these figures have remained practically unchanged.

Brimstone.—During the first five months of 1896 the brimstone market was without feature, unless an almost unvarying price during that time can be called a feature. Throughout January the ruling spot quotation for best unmixed seconds was $16.50, which on February 1st fell to $16 per ton, and remained at that figure until the latter part of April, when $16.25 was realized. May opened with the lowest prices of the year, namely, $15.50 to $15.75, which held, however, only one week, at the end of which $16 was asked per ton for spot or near-by. May also saw the highest point reached so far in the year, the quotation at the end of the month having risen to $17. During all this time thirds were obtainable at 25c. to 50c. less per ton.

The higher price in the latter part of May was caused by the report that steps were being taken to organize an association of the brimstone mine owners in Sicily for the purpose of regulating prices. The May price continued in June with a firm market, until in the middle of the month word was received that the projected association was to become a reality, when a jump of $1 per ton occurred, making the quotation for spot and to arrive $18. Before the end of June more definite information was received about the brimstone syndicate. Among its members appeared the names of Alexander M. Chance, of Birmingham, England; Baron Robert Oppenheim, Baron Eugene Oppenheim, Alfred Gordon Solomon, Charles Wightman and Ignazio Florio, of Palermo, Sicily. The agreement entered into is to be in force five years, and stipulates that the mine owners shall not compete with the trust in any way; it regulates the output at 340,000 tons per annum, which is to be sold to the syndicate at about $14.20 for best unmixed seconds and $13.85 for best unmixed thirds, delivered free on board steamers at the loading places in Sicily. At the same time application was made by the syndicate (Societa Anglo-Siciliana) to the Italian government to abolish the export tax on sulphur, amounting to $2.12 per ton. With the receipt of this information the price of brimstone took another advance, and spot quotations became $19 to $20 for seconds and $18.50 to $18.75 for thirds.

July opened with a drop in prices, $18.50 per ton being asked for seconds for July shipment, and $18 for thirds. These prices ruled during the first half of the month, after which they increased to $19.25 for seconds and $18.50 for thirds, and still later to $20 per ton for best unmixed seconds.

By the middle of August brimstone had taken quite a jump. Best unmixed seconds sold on spot for $23 per ton, and the best figure that could be obtained at that time for August arrival was $21, and thirds 60c. less per ton. For October shipment the price named was $19, which, as developments in that month proved, must have been made by dealers here "reckoning without their host" (the Societa Anglo-Siciliana) as at all times during October the spot price did not fall below $23 per ton. Before the end of August prices for spot fell to $21, but revived by the close of the month to $23 to $24.

During September the price hovered around $23, sometimes a little above and sometimes a trifle below, depending upon the arrivals wherewith to supply immediate wants. The market throughout was rather quiet.

Conditions in October were much like those in September, prices remaining the same, with the market rather stronger. Lack of importations toward the end of the month, due to the difficulty of securing transportation and consequent increase in freight rates, raised the price of best unmixed seconds to $26 per ton for spot delivery.

Throughout November the market continued strong, though some spot sales of best unmixed seconds were made at a figure several dollars below the closing price of October.

So long as the Sicilian sulphur trust exists—and there appears to be no reason why it should not outline its five years' compact—the market must continue to maintain its strength, for there are no prospects at this time of a dangerous competitor coming into the field to oppose it. Louisiana deposits have yielded comparatively little; Texas lands have yet to be developed; while the extensive pyrites deposits often mentioned as existing in the South Atlantic seaboard States are beyond reach of railroads now in existence. The field is comparatively clear for the present, and the prospects are that 1897 will be a repetition of the second half of 1896.

During 1896, the shipments of brimstone from Sicily to the United States from January 1st to November 30th were 110,000 tons, which figures practically represent the imports from that country for the year. During the same period in 1895 the shipments from Sicily were 90,000 tons. Imports of crude brimstone into the United States for the 10 months ending October 31st were reported by the Treasury Department at 115,436 tons, showing an increase of 7,810 tons over the corresponding period in 1895.

Fertilizer Manufacture and Consumption.—With the exception of 1894 the year under review has been the most active since 1886. The manufacture of fertilizers in the different sections of the United States amounted, it is estimated, to 1,500,000 tons in 1896, which compares with 1,325,000 tons in 1895, and 1,600,000 tons in 1894. Consumption during 1896 has been on an increase, reaching 1,355,000 tons, against 1,128,000 tons in the previous year and 1,575,000 tons in 1894. Commercial manures are used in the Southern States principally for the growing of cotton, while in the other States of the Union these fertilizers are used in general farming. In the Western States, where 125,000 tons of commercial manures have been used this year, there is noted increased activity in the wheat sections, due to, in a great degree, to the favorable condition of the market for that cereal.

The Northern and Northeastern States have not been as active in their consumption of fertilizers, and it would seem that the farming industry in these sections is practically at a standstill. In the latter case the consumption reached 100,000 tons, the same as last year and a decrease of 20,000 tons from 1894. In the Northern States the consumption was 220,000 tons in 1896, a decrease of 35,000 tons from 1895 and 145,000 tons from the year previous.

Shipments of phosphates from the ports of Charleston and Port Royal in South Carolina, and Savannah in Georgia, for the fiscal year ending December 1st, 1896, amounted to 382,715 tons, an increase of 127,189 tons over 1895, and a decrease of 77,896 tons as compared with 1894.

THE LIVERPOOL CHEMICAL MARKET REVIEW FOR 1896.

SPECIAL REPORT OF JOSEPH P. BRUNNER & CO.

The chemical trade during the past twelve months has not been at all satisfactory, the increased competition abroad, coupled with the business depression in the United States, having had a marked effect on the exports of several lines of heavy chemicals. Toward the close, however, there are signs of an improvement, and in several cases prices have rallied from the bottom.

Attempts have been made to fix up a working arrangement between English and foreign manufacturers on some lines, in order that prices may be placed on somewhat of a remunerative basis, and although nothing definite has yet been reported, it is not unlikely that some such agreement will be arrived at in the near future.

The Castner-Kellner Company's Works for the production of caustic soda and bleaching powder by electrolysis are now approaching completion, and their products are expected to be on the market during the early months of 1897. The development of the concern is awaited with interest by the chemical trade generally.

Soda Ash.—As ammonia soda has so overshadowed ash made by the Leblanc process, it is only necessary to review the course of the former product. The agreement made between the leading English soda ash manufacturers in the autumn of 1895, as a result of which the price of ammonia soda was advanced 10s. a ton, pointed to better times for the producers.

Although, however, prices have been well maintained for the home trade and also for most export markets, extremely low figures have prevailed in America, owing to the increased production in that quarter, and also to the severe trade depression in the United States.

The result has been a dull dragging business all through the year, while the exports from this country to the United States have decreased materially. In several cases during the early months of the year, contracts entered into by American buyers were resold on this market and diverted

to other channels, while in other cases deliveries on contracts had to be cancelled. An expansion in trade may now be reasonably anticipated, but the increased production in America is likely to continue an important factor for English makers to contend with.

Caustic Soda.—For the first six months a firm tone prevailed, the market then easing off and showing a steady decline up to October. Since then, with an improved demand, spot prices have hardened, and at the close quotations are only slightly below the figures current at the beginning of the year.

During September and the early part of October manufacturers were competing for 1897 business and very low prices were quoted for forward contracts. This did not last long, however, a sharp reaction taking place and prices recovered 10s. to 12s. 6d. per ton from the bottom, which advance has since been maintained.

Bleaching Powder has been in a more or less lifeless condition all through, gradually but steadily declining, closing about 10s. down since the opening of the year.

Chlorate of Potash.—During the early months makers tried to infuse a little backbone into the article by advancing prices, but buyers failed to respond, and beyond one or two spasmodic spurts, the demand has been unsatisfactory, buyers having been rather overweighted with contracts made last year for delivery over 1896. The highest price touched was 4¾d. during the early months, dwindling away to 3¾d. in October. There has been an improvement of late, however, and quotation has been run up to 4¼d., while a further advance is talked of, makers having sold a large proportion of their output over 1897.

FINANCIAL REVIEW OF THE YEAR.

The financial events of the year 1896 can be very briefly traced, the general course of business being sufficiently shown by the various market reviews given elsewhere in this issue of the *Engineering and Mining Journal.*

At the opening of the year there was a repetition of the conditions which existed in 1895; a heavy export of gold, a rapid depletion of the Treasury gold reserve and a general depression in business following the temporary activity of the fall. For a time business was almost at a standstill, and all parties awaited the action of the government. The so-called "popular" loan, which was after all a bankers' loan like those which preceded it, was made on terms not greatly differing from the earlier ones. The Treasury reserve was replenished for the time, and business was relieved from the apprehension of a suspension of specie payments.

During the advancing spring and the early summer, however, there was a general apprehension and a doubt as to the result of the currency discussion which caused financial circles to adopt a waiting policy and effectually checked all tendency to expansion in business. Foreign trade shrank to very small dimensions; buying of goods abroad was almost suspended, and the exports continued to be maintained only because there was a demand in Europe for our grain and copper.

The action of the party conventions in June and July made up the issue of the elections, and showed that the contest would turn wholly upon the currency question. With the advance of the year there followed almost an entire suspension of all except necessary business. The banks carefully strengthened their position against a possible panic. Loans were withheld, money was tighter almost than in the height of the panic of 1893, and all new enterprises and investments were postponed until "after election." Accompanying this state of affairs there was a constant, though quiet, hoarding of gold by banks and private parties, which continued to draw upon the reserve until it was again almost reduced to a dangerous degree. At this time the New York banks came forward and offered deposits in exchange for legal tenders, which served to tide over the crisis for the time.

Relief came from somewhat unexpected causes. The light imports and continued large exports had continued, and when it became known that nearly all the grain exporting countries had light crops and that in India there was a shortage reaching the famine point, a demand arose for our wheat which sent prices up rapidly and caused heavy buying. From this and other causes, gold imports took the place of exports and afforded relief at a time when it was most needed.

With the result of the elections we are all now familiar. The immediate effect was to release hoarded gold, set money in motion from the banks and to produce all the symptoms of a business revival. This was checked by the uncertain action of Congress, the rumors of trouble with Spain over the Cuban matter, and more than all by the announced determination of the party leaders to postpone action on the currency question, to which they owed their success, and to disturb business by a prolonged agitation of the tariff question.

Under these conditions, 1896 closed with affairs in a very doubtful condition, and there is room for very great improvement during the year which has just opened.

The condition of the United States Treasury, which is, under our present system, so important a point in business, was as follows in the closing week of 1895 and at the corresponding date in 1896:

	Dec. 26, 1895.	Dec. 28, 1896.	Changes.
Gold	$68,085,850	$136,537,249	I. $68,451,399
Silver	14,285 911	19,143,474	I. 4,857,563
Legal tenders	78,477,795	33,807,242	D. 44,670,553
Treasury notes, etc	22,232,374	35,557,335	I. 13,124,961
Totals	$183,081,930	$224,845,300	I. $41,763,370

The coinage of the United States mints for six years past is shown in the following table:

COINAGE OF THE MINTS OF THE UNITED STATES.

Year.	Gold.	Silver.	Year.	Gold.	Silver.	Year.	Gold.	Silver.
1891	$29 222.105	$27.518,857	1893	$30,038,140	$12.560.935	1895	$59,596,357	$5.698,010
1892	34,787,223	12,641,078	1894	99,474,913	6.024.898	1896	42,689,895	20,537,931

NOTE.—The 1896 statement is for 11 months.

The United States imports and exports of gold and silver for a period of five years have been as below, all United States ports being included in the statement, the figures for which are furnished by the Treasury Department.

UNITED STATES IMPORTS AND EXPORTS OF GOLD.

Year.	Gold in Ores.		Gold Coin and Bullion.		Total Excess.	
	Imports.	Exports.	Exports.	Imports.		
1892	$714,110	$9 262	$66,532,656	$17,450,946	Exp.	$58,376,262
1893	518,186	276,933	79.775.820	72,762,389	Exp.	7,772,178
1894	743,646	149,501	101.819.924	20.607.561	Exp.	80.628,818
1895	1,857,666	740.312	104.605,023	32,538.736	Exp.	70,949,943
1896	1,736,048	183.651	56.336.988	100,197.486	Imp.	45,412,895

UNITED STATES IMPORTS AND EXPORTS OF SILVER.

Year.	Silver in Ores.		Silver coin and bullion.		Total excess.	
	Imports.	Exports.	Exports.	Imports.		
1892	$9.726,704	$1,592,931	$35,975.834	$21.726,252	Exp.	$6,116,009
1893	9,490,892	.....	46.288.721	18,274,804	Exp.	37,504.869
1894	7,869,186	.....	47,044.205	9,821,468	Exp.	29,410.611
1895	12,087,240	62,584	53,833,153	11,286,007	Exp.	30,522 390
1896	16,069,271	892,120	56,209,791	1 ,224,776	Exp.	29,807,864

NOTE.—The statement for 1896 is for 11 months. For 1893, 1894 and part of 1895 exports of silver in ores were not reported separately.

The average price of silver for the year showed an increase over 1895. The price rose in the earlier part of the year, but later fell considerably. The average for each month of the year is shown in the following table:

Average Monthly Prices of Silver

In New York and London, per ounce Troy, from January 1st, 1896, and for the years 1895 and 1894.

Month.	1896.		1895.		1894.	
	London. Pence.	New York. Cents.	London. Pence.	New York. Cents.	London. Pence.	New York. Cents.
January	30 69	67·13	27·36	59·69	30·81	66·63
February	31·01	67·67	27·47	59·90	29·18	63·43
March	31·34	68·40	28·33	61·98	27·22	59·49
April	31·10	67·92	30·39	66·61	28·95	62 92
May	31·08	67·88	30·61	66·75	28·69	62·96
June	31·46	68·69	30·47	66·61	28·68	62·59
July	31·45	68·75	30·48	66·75	29·82	62·45
August	30·93	67·34	30·40	66 61	28·29	61·83
September	30·19	65 68	30·54	66·90	38·88	64 14
October	29 68	65·05	30·89	67·64	28·69	63·06
November	29·46	64·98	30·79	27·42	39·41	65·13
December	29.70	65.24	30·40	66 47	27·78	60·43
Year	30·07	67·06	29 53	65·28	29·13	63·00

The New York prices are always per fine ounce, or ounce of pure silver; the London quotation is per standard ounce, or for metal 925 fine.

An important element in the silver market is found in the shipments from London to the East. These are given by Messrs. Pixley & Abell's circular for five years past as follows, the figures for 1896 being up to December 17th.

SHIPMENTS OF SILVER FROM LONDON TO THE EAST.

	1892.	1893.	1894.	1895.	1896.
India	£7,2 9.199	£7,05?,271	£5,012,093	£3,621,493	£1,440,178
China	117,882	2,390,969	2,728,771	1,652,523	725,985
The Straits	3,826,738	1,612,513	1,233,446	753 883	746,396
Total	£11,203,819	£11,055,753	£8,974,310	£6,030,902	£5,912,559

Shipments of silver from San Francisco for the 11 months ending November 30th were $11,158,047, of which $6,387.087 went to China, $3,957,008 to Japan and the balance to the Straits and India. Shipments to China increased and those to Japan decreased.

Abroad the accumulation of gold by the great banks has been a feature of 1896 as of 1895. The following table shows the gold holdings of the leading banks through 1896, those of the New York banks being added for comparison:

Bank.	Gold holdings in 1896.		
	Jan. 1.	July 1.	Dec. 24.
Assoc. New York	$68.954,700	$61,866,300	$77,251.600
England	227,659,000	239,165,845	169,048,635
France	386,869,100	409 215,900	385,658.800
Imp. German	208,270,000	217.930,000	213,885,000
Austro-Hungary	120,203,750	136,210,000	153,150 000
Netherlands	17,584,000	13,172 000	13.172,000
Belgian National	20,666,000	20.652.000	20 831,000
Spain	40,022,000	42,028,000	42 611,000
Italy	59,260,000	60,625,000	59,835.000
Russia	396 370,000	472,715,000	489.910,000

The holdings of the Imperial Bank of Germany and the Belgian National Bank include silver also.

The Bank of England stock of gold toward the close of the year was decreased by heavy shipments to the United States and the same affected, though in a less degree, the Bank of France also. The Austro-Hungarian Bank continued to increase its holdings nominally in preparation for a currency change. The most remarkable accumulation is in the Bank of Russia, which increased no less than $23,540.000 during 1896, and now holds close upon $500,000,000 in reserve. It may be noted that Russia last year absorbed about 43% of the total gold production of the world for the year.

THE MINING STOCK EXCHANGES IN 1896.

We give below reports from all the leading exchanges in which there are dealings in American mining stocks. In this country the general financial conditions have not been favorable to speculation and the general condition of affairs on the exchanges has been one of quietude and depression rather than of activity. It is to be noted, that while there has been great activity in gold mining, the shares of gold mining companies have attracted little attention. The interest shown has been in mining work rather than in speculation.

THE BOSTON STOCK MARKET IN 1896.

BY OUR SPECIAL CORRESPONDENT

The market for mining stocks in Boston for 1896 has been fairly active, especially in the copper stocks, which are a Boston specialty. The leading stock in point of activity and wide fluctuations in price is that of the Boston & Montana Copper Company, the dealings in which have aggregated more than all the others together. The stock is widely distributed and is a favorite with speculators, who are enabled to manipulate prices to suit their purposes. The company has paid $10 per share in dividends for the year, and has sold at a range from $65 to $96½ per share during the year. Its lowest point was touched on January 7th, and the highest November 16th. Its present price is about $92.

Next in point of activity we note Butte & Boston, a stock which was supposed to have considerable merit, and sold at one time last year at $28½ per share. Owing to some legal complications the mine was closed down early this year, and the stock after selling at $13¼ dropped to $1½ per share. Recently a large block of stock owned by the Davis estate was purchased by a syndicate, and steps are being taken to reorganize the company, and assess the stockholders $10 per share. The company has been under the same management as the Boston & Montana, and is believed to have a good property. Recent sales of the stock were at $7⅜ per share.

The Old Dominion Copper Company has a mine which belongs to the same class as the foregoing, and has many friends. The stock has been quite largely dealt in, and was put on the unlisted department of the Exchange in December, last year, at $17 per share. It has sold at $23¼ during the year, and as low as $10¼. Its present price is about $16.

The Lake Superior mines have had a fair share of business during the year, with the inevitable ups and downs characterizing this class of stocks. Foremost of all is the old reliable Calumet & Hecla, with its famous record. Its lowest price for the year was $295, and the highest touched was $335, for a single share. It has paid $25 per share in dividends the past year, and is now selling at about $325, with a dividend recently paid.

The Tamarack has had hard luck the past year and was obliged to reduce its dividends from $8 per share last year to $6. Its market record is from $120 to $65, recently the mine has improved in its outlook and the present price is about $92 per share. Since its organization it has paid $830,000 in dividends.

Quincy at one time sold up to $134 per share; its lowest record was $104 ex-dividend in August last. The company has paid $20 in dividends the past year, and at its present price, $120, is considered a safe investment. The scrip, on which $18¾ has been paid, sold at $63 and $97 respectively. A further and final installment of $6¼ per share is due in April next, when new stock will be issued which will partake of future dividends.

Osceola is a stock of which many good things are said. It sold during the year at $20½, the lowest, and $31½, the highest figure. The present price is $28½. The dividends for the year were $2½ per share against $3 for 1895.

Kearsarge is quite a favorite speculative stock, and has been largely dealt in this year. The price has ranged from $8¾ to $17¾; at present it is selling at $15½. The company has not paid a dividend this year.

Franklin, one of the oldest mines on the list, has not been very active. The stock sold at $8 and $15. Present price about $11. The original mine is supposed to be nearly exhausted, and work on the new property called the Franklin, Jr., has been pushed the past season with favorable results.

Atlantic sold at $15 in August, which was the lowest for the year. In November it touched $23½, the present price being about $21½. The stockholders have not received a dividend for several years, but it is confidently expected that dividends will be resumed in 1897.

The Tamarack, Jr., mine is being rapidly developed and the outlook is considered encouraging. Its market price has ruled from $8 to $17½ per share. The present price is $13½.

Wolverine is another mine of which great things are expected. It sold in January at $5⅞, and lately touched $9⅜, which is the highest for the year. It is now selling at $8½.

Centennial has been reorganized and assessed $2 per share. It sold at one time at 10c. per share, assessment unpaid, and later at $2½, assessment paid.

Arnold was also assessed $1 per share. Before the assessment was levied it sold at $1¾ per share, and also at 25c. The latest sale was at 30c., assessment unpaid.

Tecumseh is a mine which is being developed, and is said to have the Calumet & Hecla vein. The latest reports state that as depth is attained the rock improves in appearance. The stock is well held and sold at $1¼ at one time during the year. Later it touched $4½. The last sales were at $3.

National sold at 75c., the only price for the year.

Allouez sold as high as $1 and as low as 25c. per share.

There have been a few sales of Lake Superior Iron Company stock at $28½ to $29 per share, but very little of it comes on this market.

The gold and silver mines have been more or less active during the year, but the speculation has been confined to two or three specialties. The Merced mine has shown the widest fluctuations. When first dealt in it sold up to $35 per share, which was considered at the time much above its real value. Later it was assessed $2 per share and sold at $3½; since it has gradually worked up to $8½. Its present price is about $6¼.

FLUCTUATIONS OF MINING STOCKS AT BOSTON DURING 1896.

Name and Location of Company.	Par Value.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Sales.
		H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	
Copper:																										
Allouez, Mich.	$25	1.00	.30	1.00	.....	1.00	.....	1.25	1.00	1.00	.....	.25	.....	.50	.....	.....	.....	.50	.40	.50	.....	1.00	.75	.....	.....	2,620
Arnold, Mich.	25	1.57	1.00	1.50	1.13	1.38	1.00	.....	.....	1.63	1.50	.....	.....	.....	.....	1.25	.....	1.38	.....	1.25	1.00	1.25	.25	.50	.25	14,665
Atlantic, Mich.	25	17.50	15.00	20.25	17.00	20.00	16.00	18.25	17.25	21.75	17.00	22.25	17.75	19.00	16.00	16.00	.....	18.50	15.50	18.00	17.00	24.00	18.75	22.00	20.50	13,371
Bos. & Mont., Mont.	25	69.00	65.00	81.00	72.00	79.75	72.00	77.13	73.75	88.75	74.00	91.50	82.13	80.00	75.00	78.00	72.25	91.25	76.75	90.25	80.50	96.50	88.25	93 00	88.50	817,326
Butte & Bos., Mont.	25	13.25	11.00	11.00	2.88	3.00	1.00	3.25	1.50	3.00	2.25	2.63	2.00	2.00	1.63	2.00	1.50	3.50	1.50	3.00	1.50	6.25	2.13	7.38	5.00	266,542
Cal. & Hecla, Mich.	25	298.00	290.00	305.00	300.00	310.00	305.00	309.00	305.00	311.00	300.00	310.00	303.00	303.00	.....	310.00	300.00	315.00	300.50	320.00	310.00	335.00	315.00	325.00	320.00	3,087
Centennial, Mich.	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.13	2.00	9,733
Franklin, Mich.	25	12.25	10.50	15.00	13.50	15.00	11.00	12.50	11.00	14.25	10.38	11.50	8.50	11.00	8.50	10.00	8.00	10.00	8.00	9.00	.....	12.50	10.50	12.00	11.00	6,859
Kearsarge, Mich.	25	13.50	10.50	13.50	12.13	17.75	10.38	11.75	9.00	14.50	7.88	14.25	10.50	12.50	9.50	10.00	9.00	14.00	9.50	13.50	9.75	17.75	13.00	17.00	15.38	51,792
Old Dominion, Ariz	25	19.00	16.38	19.50	17.25	18.50	15.00	17.00	13.50	22.50	15.00	22.00	13.38	16.38	11.00	14.50	10.25	17.75	14.50	17.25	14.75	19.75	16.00	18.00	15.88	153,625
Osceola, Mich.	25	27.25	22.13	29.00	23.50	28.35	24.50	26.00	24.88	31.50	24.25	29.50	25.00	26.00	21.00	23.75	20.50	28.00	24.00	27.50	24.75	32.00	27.00	30.75	29.00	28,860
Quincy, Mich.	25	125.00	120.00	134.00	122.50	130.00	124.00	125.00	115.00	125.00	112.00	120.00	112.00	115.00	107.00	108.00	104.00	111.00	.....	114.00	110.00	130.00	116.00	120.00	118.00	5,667
Quincy Script, Mich	...	70.00	65.00	75.00	69.00	81.25	71.00	81.25	78.00	85.00	77.50	83.50	80.00	84.00	75.00	78.00	76.00	88.00	77.00	85.00	80.00	97.00	88.00	95.00	94.50	4,709
Tamarack, Mich.	25	120.00	111.00	117.50	103.00	112.00	86.00	100.00	85.00	104.00	88.00	95.00	82.00	84.00	72.00	75.00	65.00	90.00	70.00	88.00	81.00	102.00	85.00	95.00	91.00	12,557
Tam. Script, Mich.	...	90.00	80.00	88.00	82.00	85.00	.....	.....	.....	.....	.....	82.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	436
Tam., Jr., Mich.	25	17.50	12.50	17.50	14.00	16.25	14.50	15.00	14.50	14.50	12.25	13.50	10.00	10.75	9.00	9.00	8.00	13.50	12.00	12.00	11.75	15.50	11.50	16.00	13.00	17,689
Tecumseh, Mich.	25	3.25	2.00	4.50	3.25	4.00	3.00	3.00	.....	3.25	2.50	3.10	1.75	2.00	.....	.....	.....	4.00	2.00	4.00	3.25	4.00	3.50	3.25	3.00	11,605
Wolverine, Mich.	25	7.00	5.75	8.00	6.50	8.00	6.63	7.25	6.50	8.00	6.38	7.75	6.50	7.50	6.25	6.50	6.00	7.50	6.00	7.50	6.75	9.38	7.25	9.50	8.25	35,026
Gold:																										
Bos. & C. C., Colo.	1	.50	.35	.43	.30	.38	.30	.28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.26	.....	.....	.....	.20	.10	.10	.....	23,280
Gold Coin, Colo.	1	1.00	.90	1.00	.80	.90	.60	.80	.60	.70	.50	.60	.48	.50	.45	.55	.50	2.50	.....	3.00	2.35	3.20	2.75	3.23	3.05	138,851
Merced, Cal.	15	34.75	28.25	34.50	27.50	33.00	19.00	21.00	11.25	14.13	9.50	14.38	6.20	7.50	3.75	5.75	3.75	8.75	7.50	8.00	5.75	10.00	7.00	7.50	7.00	103,816
Pioneer, Cal.	10	4.88	4.00	7.25	4.00	10.88	7.50	10.00	7.75	9.13	5.75	6.13	3.00	5.50	3.13	4.25	3.25	6.75	4.00	6.50	4.88	8.00	4.50	5.63	4.38	334,532
Santa Rosa, Cal.	10	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	650
Santa Ysabel, Cal.	5	11.00	9.00	14.75	11.00	16.38	13.00	14.50	12.50	13.00	12.00	13.00	10.00	9.00	6.75	9.00	7.00	10.00	9.00	10.00	8.00	11.88	9.25	11.75	10.50	37,449
Miscellaneous:																										
Domin. Coal, N. S.	100	11.00	9.38	14.25	10.50	15.00	13.25	15.00	12.75	16.00	13.50	15.50	8.50	10.25	7.88	8.00	6.25	8.50	7.50	8.75	7.00	12.00	9.38	11.50	10.00	183,357
Domin. Coal, pref.	100	90.00	83.00	92.00	88.00	94.00	92.00	92.00	89.00	93.00	92.00	93.00	91.25	86.00	80.00	81.00	80.00	81.00	.....	84.00	80.00	90.00	85.00	92.50	91.00	3,471
Illinois Steel, Ill.	100	64.50	62.00	70.00	65.00	67.00	61.00	75.00	67.00	72.50	68.00	65.00	59.00	60.00	49.50	45.50	36.00	48.50	37.00	47.00	39.75	57.00	47.00	48.25	43.00	34,425
Lake Sup. Ir., Mich.	25	29.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	28.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	260
Napa Con. Q'ks., Cal	7	7.50	7.00	7.00	6.88	10.00	7.00	.....	.....	7.00	.....	7.00	.....	.....	.....	.....	.....	7.00	6.50	7.00	6.88	6.75	.....	.....	.....	1,545
West. E. & M., Pa.	50	31.50	29.50	31.50	28.75	31.00	28.00	30.50	29.00	29.00	.....	29.00	.....	27.88	24.00	24.50	23.00	24.00	23.25	25.00	23.00	28.00	26.00	.....	.....	7,862
West. E. & M., pref.	50	54.00	52.00	53.50	52.38	53.00	52.00	54.00	52.75	53.00	52.00	54.00	50.75	50.00	48.75	49.50	48.50	51.00	49.50	50.00	48.75	51.75	49.50	52.00	50.00	4,816

NOTE.—Total sales for the year, 1,324,483.

Pioneer has been the favorite gold stock and has been quite active. Last winter it was pushed up to $10⅞ per share; since then it has sold down to $3¼, and up again to $9⅛. Its present price is about $5.

Santa Ysabel has also been subject to wide fluctuations; its lowest price was $7; highest, $16⅜, and it is now about $10.

Gold Coins mine was originally put on the market with 1,060,000 shares of a par value of $1. Last spring it was converted to 200,000 shares, of a par value of $5. It paid three dividends of 1½c. per share on 1,000,000 shares, and under the new deal two dividends of 10c. per share. Its market price was 47½c. under the former, and $3.22½ under the latter. It is now selling at $3.05.

The Boston & Cripple Creek stock early in the year sold at 47½c.; latterly its market price was 10c.

The Napa Quicksilver Company has paid 80c. in dividends the past year. Its stock is largely held for its dividends, and is not often on the market. It has sold at $6.50 and $7.50 per share during the year. The Ætna Quicksilver Company's stock also is rarely quoted. Its price is about $4 per share.

While the year now closed has not fulfilled all the expectations of the friends of mining industries in Boston, there is much to encourage the belief that the coming year will be one of unusual prosperity.

THE CLEVELAND MINING STOCK MARKET IN 1896.

The business depression that marked the year 1896 had an ill effect on the mining stock market of Cleveland. The sales that were recorded were, as a rule, quite light. Early in the season it became apparent to the dealers in mining stocks that the Presidential campaign, with the agitation that would follow as a consequence, would interfere with business for some months at least. Investors took that view of the situation, and the ultimate result of the closing of some of the mines and the general feeling of uncertainty is that very few of the stocks are quoted at a higher rate than they were at this time last year. One company's

stock has declined considerably during the past twelve month. Those which have held their own against the depression consider themselves very fortunate.

Republic stock advanced from $12 to $16 during the year, an increase of 33⅓%. Lake Superior Iron Company stock fell from $32 to $25; Chandler dropped from $38 to $30; Cleveland-Cliffs Iron Company stock rose by easy stages from $40 to $45; Pittsburg, Lake Angeline and Jackson were steady at $75. Minnesota began the year with a quotation of $70 and closed with $66. The brokers anticipate a heavy movement of stocks when the political problems are solved, and they are making arrangements to transact much business during the spring and early summer.

THE MINING STOCK EXCHANGES OF COLORADO IN 1896.

The speculative excitement in Colorado in 1895 attendant upon the Cripple Creek discoveries, increasing output, larger development, heavy investments in mining ground and the formation of many new companies, abated considerably during 1896. The Cripple Creek boom had passed its culminating point; yet on the whole trading was fairly active early part of 1896, the Board of Trade and the Consolidated united. For the year the whole business in listed stocks at Colorado Springs amounted to 42,867,424 shares, for which, taken altogether, much lower prices were obtained than ruled in 1895. The most active stocks at Colorado Springs were: Isabella, 5,113,198 shares sold at quotations ranging from 38½c. to 66½c.; Pharmacist, 3,530,000 shares, 5½c. to 20½c.; Cripple Creek Consolidated, 2,797,512 shares, 8½c. to 22½c.; Creede & Cripple Creek, 2,610,150 shares, 2c. to 9c.; Work, 2,222,150 shares, 6c. to 26c.; Union, 1,969,500 shares, 23½c. to 60c.; Fanny R., 1,227,550 shares, 2⅝c. to 12⅝c.; Garfield-Grouse, 1,220,206 shares, 3½c. to 10½c.; Alamo, 1,203 017 shares, 3c. to 10½c., and Jack Pot, 1,000,650 shares, 2½c. to 15c. Portland, which may be taken as a representative Cripple Creek property, opened at $2 in January, sold down to $1.07½ in August, and closed at $1.28 to $1.36, the total sales for the year being 638,474 shares. Of the Aspen stocks, Mollie Gibson sold at 54c. in January, and was fairly steady throughout the year, the lowest quotation being 40c., while Argentum-Juniata, which touched 70c. in March, went to 41c. in August, and in December stood at 44c. to 50c.

FLUCTUATIONS OF MINING STOCKS AT COLORADO SPRINGS DURING 1896.

Name of Company.	Par Value.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Sales.
		H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	
Ajax	$1.00	.15	.10	.15	.09			.10		.10						.10										55,450
Alamo	1.00	.10½	.08	.08½	.06	.07½	.05⅜	.08	.03	.06½	.04	.06	.03	.06	.03½	.04	.03	.05½	.03½	.05½	.04½	.07⅜	.05⅜	.08⅛	.05¼	1,203,017
American C.	1.00	.06⅛	.04⅛	.05	.03	.04	.02	.03½	.01¾	.02½	.01⅛	.02	.01¼	.02¼	.01⅜	.01¾	.00⅞	.02⅜	.01	.02⅝	.01⅞	.03⅞	.02¾	.05⅜	.04	620,876
Anaconda	5.00	.72¾	.64	.67	.54¾	.70¼	.52½	.70	.50	.70	.55	.65	.57	.62	.50	.56	.31	.65	.40	.80¾	.49½	1.40	.84	1.20	1.01	687,230
Anchoria-L	1.00	3.50	2.50																							3,015
Aola	1.00	.05¾	.03¼	.04	.02⅞	.03½	.01⅛	.03¾	.01	.02½	.01	.02	.01	.01⅝	.01⅛	.01⅛	.01									122,375
Argentum-J	2.00	.62	.43	.69	.60	.70	.50	.64	.50	.58	.47½	.59	.49¾	.57½	.49¾	.52	.41	.60	.42½	.58½	.49	.55	.45½	.50	.44	765,745
Bankers	1.00	.22½	.17¾	.20⅛	.16¼	.20	.14	.16	.09	.14¾	.11	.14	.11½	.13	.09	.10⅛	.07	.10	.08¼			.14	.13⅝			290,700
Banner	1.00	.05¾	.04¼	.06	.03¾	.06	.03	.05¾	.04	.05½	.02¾	.05⅛	.02	.05	.01	.04	.01	.04	.01	.04⅝	.01⅛	.04	.02¾	.05½	.01¼	180,100
Ben Hur	1.00	.11⅜	.07¼	.08⅛	.06	.07⅛	.05¼	.07	.03¾	.06¼	.04	.06½	.03⅛	.06	.02	.05	.04	.05	.04⅛	.05¾	.05½	.07	.06	.06⅝	.06⅛	258,000
Blue Bell	1.00	.14	.08½	.10⅝	.07½	.10	.05¾	.08⅛	.04⅛	.08	.04	.06	.02⅞	.06	.02¾	.05	.02⅛	.08¾	.04	.10	.05¾					96,950
Bob Lee	1.00	.04	.02¼	.03	.01⅞	.03	.01	.02	.008	.01¾	.01	.01½	.00¾	.01¼	.005	.00⅜	.00⅛	.01½	.007	.01⅜	.01	.02½	.01⅝	.01½	.01¼	631,530
Boston & C. C	1.00	.02¾	.01⅞	.02¼	.01½	.02	.01	.02½	.00⅞	.01¼	.005	.01	.005													93,500
Buckhorn	1.00	.09	.06¾	.10	.06	.07⅛	.04¾	.05	.02⅛	.03¾	.02⅛	.03⅞	.02¾	.03¼	.02	.02¼	.01⅛	.02⅜	.01⅞	.03	.02¼	.04½	.03⅜	.04¼	.03⅝	742,350
Colo. C. & M	1.00	.08¾	.06⅞	.07⅜	.05	.06½	.04¾	.05¾	.03⅜	.04	.03	.04⅝	.03¼	.04⅛	.03⅛	.03⅜	.02⅞	.04⅛	.03⅜	.04¼	.03⅝	.04¾	.04¼			722,500
Columbine	1.00	.06¼	.04⅛	.04¼	.02⅝	.03⅛	.02⅛	.03¾	.01⅛	.03¼	.01¼	.03	.01	.02	.01⅜											78,000
Copper Mt	1.00	.03½	.01⅞	.02⅛	.01½	.02¼	.01¼	.02	.008	.01½	.005	.01¼	.005	.01¼	.006½	.01¼	.009									279,300
Creede & C. C	1.00	.07¼	.06½	.07¾	.05⅝	.08	.04½	.05¼	.02	.04⅛	.03	.04⅞	.03	.05¼	.03½	.09⅛	.04⅛	.09⅛	.07⅜	.08⅜	.06	.09	.06¾	.07¼	.06	2,610,150
C. C. Cons	1.00	.22½	.18¾	.22	.16¼	.19½	.18½	.17¼	.12½	.14¾	.13¼	.15⅜	.13⅝	.15	.10½	.12⅝	.08⅜	.14⅞	.09⅞	.14⅞	.12	.20½	.14¾	.16½	.14⅝	2,797,512
Cripple Cr'k Ex	1.00	.17¼	.17	.18	.17	.18	.16	.17	.12½	.13	.12½	.12½	.12	.12¼		.12¼	.12	.13	.12¼	.12½	.03½	.10¾	.10	.10		299,000
Crœsus	1.00	.03½	.02⅞	.03¼	.02	.03	.02	.02½	.01½	.02	.01	.01½	.01	.01⅛	.007	.03	.006	.01⅝	.007½	.01½	.009	.01⅜	.01¼	.01¼	.01	622,550
Dante	1.00	.13	.11¼	.12⅞	.09	.12	.08	.11¾	.06½	.10½	.07	.10	.06¾	.10½	.05	.08¾	.05			.08½				.08¾		123,450
Des Moines	1.00	.08½	.07½	.07¾	.06½	.08	.04	.08	.02	.05	.02	.03½	.02	.03⅛	.02	.04½	.01	.02¾	.01⅞	.03¼	.02¾	.04⅛	.01⅛	.04	.03	354,500
Enterprise	1.00	.27	.19½	.23	.17	.20	.11	.13	.09⅝	.10¼	.07	.10	.07	.09½	.05	.08	.04	.08	.03¾	.07⅞	.06¼	.08½	.07¼	.07⅝	.07⅜	155,825
Fanny R	1.00	.11	.07¾	.12	.07⅛	.12⅝	.09	.12	.08	.10¼	.07½	.10	.07¼	.08¾	.05⅛	.08	.05	.08	.05¼	.08	.05¾	.07½	.06¼	.06⅞	.02⅝	1,227,550
Favorite	1.00	.16	.10	.11¾	.09	.09⅞	.06	.08	.04½	.08	.04	.08½	.05½	.08	.04	.06⅜	.05	.07½	.04	.08⅞	.07¼	.15½	.08⅞	.09½	.08	455,056
Franklin	1.00	.02¾	.02⅛	.02⅝	.01	.02	.01	.02¼	.00⅝	.01½	.008	.014	.005	.01¼	.003½	.007½	.004½	.01	.006	.01⅛	.008½	.01½	.01	.01¼		625,550
Garfield Grouse	1.00	.08	.05¼	.06⅞	.05⅜	.06⅛	.04½	.05¼	.03½	.04½	.03⅛	.04⅜	.03⅛	.03⅞	.03⅛	.04¼	.03¼	.05⅛	.03½	.10¼	.05⅜	.10½	.09⅛	.09⅞	.08¾	1,226,206
Golden Age	1.00	.04⅝	.03	.03½	.01¾	.03	.01½	.02¼	.01	.01⅞	.01	.03	.01	.02	.00⅞	.01¼	.008	.008		.03¾	.02⅛	.03⅜	.02⅜			230,650
Golden Eagle	1.00	.05¾	.04½	.05	.03	.05	.02	.03½	.01½	.03½	.01	.02¼	.01	.02½	.009	.01¾	.01			.03	.01¾	.04	.03			114,150
Golden Fleece	1.00	1.75	1.50	1.68	1.50	1.68	1.40	1.75	1.60	1.71	1.64	1.70	1.40	1.50	.92½	1.05	.82	1.20	1.00	1.02	.99	1.09	.97	1.00	.96	168,990
Gold & Globe	1.00	.28	.20	.28½	.17½	.24½	.19	.24	.20	.24	.19½	.22	.18	.20	.16	.18	.14½	.17	.10	.14¾	.14	.17½	.14⅞	.15⅜	.13½	153,200
Gold King	1.00	.66	.30	.61	.45	.60	.42	.60	.45	.53	.27½	.50	.25	.55	.40	.34		.45	.35	.62	.55					15,300
Gold Standard	1.00	.12	.09	.10¾	.08	.10⅝	.08⅜	.10	.04½	.10	.07¼	.09	.05	.08	.03¼	.04⅞	.03	.04½	.04	.05	.04¾	.05½	.05			233,100
Gould	1.00	.19⅛	.11⅜	.16	.12	.14½	.10	.14	.06	.08¼	.05	.09	.05	.08	.05	.07	.04	.12	.06	.14⅛	.11¼					147,475
Grotte	1.00	.04	.02¼	.02⅝	.01¾	.02¼	.01⅞	.01¾	.01⅛			.01½	.009	.012	.007											208,000
Henrietta	1.00	.04	.03	.03⅜	.02¼	.02⅝	.01⅝	.02	.008½	.012½	.008	.01¼	.007	.009	.007½	.007	.005½									340,010
Humboldt	1.00	.05¾	.04	.05	.03	.04⅛	.02½	.03¼	.01	.05	.01	.03	.01½	.02¼	.01⅝	.05¾	.04½	.02	.01½			.03⅜	.03			245,200
Ida May	1.00	.17	.14½	.16	.14½	.20	.14	.16	.10	.15	.13	.12¼				.15	.14	.12	.10							82,300
Ingham C	.50	.26	.25	.25½	.22	.26	.24	.26	.10	.25	.21	.25	.18	.23	.15	.20	.04	.12	.04	.10¼	.09½	.10⅞	.09¾	.11	.10	209,834
Iron Clad	1.00	.12	.08	.10	.06½	.08⅞	.05½	.06¼	.04½	.05¼	.04	.05¼	.02	.03⅝	.02½	.07	.03¾	.07½	.06⅛			.09¼	.08⅞			251,466
Isabella	1.00	.60½	.55	.57⅜	.49¾	.58¾	.49½	.58¼	.51⅞	.59¼	.52¼	.66¼	.59¼	.64¾	.53¼	.54	.40	.44½	.40¾	.46¾	.38⅛	.48	.41	.44¼	.42	5,113,198
Isabella Stamp	1.00	.66	.52	.54	.48¾	.58½	.48½	.57¾	.51½	.58¾	.52⅜	.66	.58½	.64½	.51½	.53⅛	.38½	.47	.39¾	.46¼	.38	.46¼	.40¼	.43¾	.41	873,050
Jack Pot	1.00	.15	.12	.12½	.08¾	.12	.08	.10	.05	.07	.05	.05¾	.04¼	.05¾	.02½	.05	.02¾	.06	.04	.07½	.05⅝	.08	.05⅞	.08¾	.05	1,009,650
Jefferson	1.00	.26	.19	.22⅞	.18	.26	.16	.22	.15	.18¾	.14	.20	.15	.20	.15					.12½	.12¼			.14	.12	287,500
Keystone	1.00	.10¼	.07⅛	.08	.05¾	.08⅛	.05	.06	.03½	.05	.03	.04⅞	.02⅞	.03¾	.02	.02¾	.02¼	.05⅛	.02½	.05¼	.04½	.06	.05½	.05½	.04⅞	150,500
Ladessa	1.00			.02	.01¼	.01¾	.01¼					.005	.004½	.006		.005½	.003									28,000
Lincoln B	1.00	.08½	.07	.08	.06¾							.02¼	.008	.008	.004											38,000
Lottie Gibson	1.00	.04	.02⅞	.03¼	.01¼	.02⅛	.01	.02½	.007½	.02	.007½	.01½	.006½	.01	.005											163,300
Marion	1.00	.02	.01	.01½	.01⅜	.01¾	.01¼	.01¾	.008	.01¼	.006	.01	.002½	.01	.002	.005¼	.004	.009½	.004	.01⅛	.008¼	.01⅛	.008½	.008⅛	.007½	852,300
Matoa	5.00	.30½	.20	.27	.20	.25	.10	.20	.10	.14	.08¼	.13	.09	.11½	.04½	.09	.02	.12⅝	.06	.14¾	.11	.15½	.12	.11⅝	.10	201,100
Mollie Gibson	1.00	.54	.40	.51	.45	.84	.47	.75	.50	.80	.50	.85	.61	.80	.46	.51½	.40	.50	.41	.50	.41½	.68	.45	.63	.55	376,175
Monarch	1.00	.13½	.06	.07½	.05	.07	.01¼	.06	.03	.06	.02½	.06	.02	.05	.04¼	.02½	.02	.02½	.009	.04⅝	.03⅝	.05½	.03¾	.05⅝	.05⅜	82,200
Mt. Rosa	1.00	.21	.14½	.18	.15	.17¼	.10½	.15	.08⅛	.11	.08	.15	.09	.13¾	.11¾	.12	.09⅞	.18	.11¼	.22	.14⅜	.16¼	.14⅞	.14⅞	.12	869,730
Mutual	1.00	.08½	.07½	.08⅜	.07	.08	.04¼	.06	.02¾	.04	.03	.04	.01	.03¼	.02	.03½	.02¾	.05	.02⅞	.04⅛	.03½	.06⅜				228,750
Nugget	1.00	.15	.10	.15	.10	.15	.06	.15	.03	.08	.04	.12	.06	.13	.07			.06½	.04½	.10	.06¼					38,494
Ophir	1.00	.12½	.10	.12	.09½	.12	.08	.10	.05	.10	.05	.10	.03	.08	.04	.06¾	.05	.09⅞	.05¾	.08¼	.07¼	.09½	.08⅞	.09	.08⅜	164,850
Oriole	1.00	.05¾	.04⅞	.05½	.04	.04⅝	.03	.03½	.02½	.03½	.02½	.03⅜	.01⅞	.03	.01	.02½	.01¾	.05	.02	.05	.02½	.03⅞	.02⅜	.02⅜	.02	676,000
Orphan B	1.00	.14	.10	.13½	.09	.15	.08	.12	.07	.14	.07	.11¾	.06	.12	.08	.09	.07½	.12	.07¼	.11	.09¼	.12	.11⅝			138,200
Pappoose	1.00	.09½	.06½	.08¾	.06½	.07	.05	.06	.03¼	.04	.02⅜	.04¾	.03	.04⅛	.03¼	.03½	.02	.02¾	.02⅜	.04⅛	.02¾	.03¼	.03⅛	.03¼	.02⅞	951,500
Pharmacist	1.00	.18⅞	.13	.17	.14¼	.15	.11⅛	.11⅛	.07⅞	.08½	.05¾	.10⅞	.06¾	.10⅝	.08	.08⅞	.07½	.11	.08½	.16½	.11½	.20¼	.15⅝	.17	.15	3,530,090
Portland	1.00	2.00	1.65	1.85	1.41	1.79	1.35	1.52	1.33	1.86	1.43	1.96	1.72	1.78	1.28½	1.32½	1.07½	1.38	1.18	1.55½	1.35	1.45	1.27	1.35	1.28	638,474
Princess	1.00	.11	.09½	.11	.08	.14	.11	.12	.10			.07½	.02	.07	.04	.07½	.02½	.04½	.02							11,000
Reno	1.00	.09⅝	.06	.08	.04½	.06	.03¼	.05¾	.02	.06	.03¼	.05	.01	.02⅜	.01½	.02¼	.01⅝			.03¼						50,000
Sacramento	1.00	.10	.08	.10½	.06½	.09	.07	.09	.05	.06½	.04½	.05	.01⅛	.04⅜	.03¼	.03½	.02⅞	.03½	.03	.06⅜	.04⅞			.05¾	.05⅜	251,950
Silver Street	1.00	.02½	.02	.02¾	.01½	.02	.01	.02	.007½	.01½	.005	.01½	.005	.01¼	.005			.01½	.01⅜							89,250
Specimen	1.00	.17	.15	.15	.13	.13¼	.10	.10½	.08	.10	.07	.10	.07	.10½	.06	.10⅛	.06	.08½	.07½	.08¾	.07⅜	.09	.07⅞	.08¾	.08	410,150
Squaw Mt. T	1.00	.12	.09¾	.11	.07⅞	.08	.05	.06	.03⅜	.04	.01⅞	.03⅜	.01¼	.02¾	.01⅞	.02⅝	.01	.02⅜	.01¾	.02¾	.02¼	.02⅝	.02⅜			751,500
Temonj	1.00	.16	.10	.14	.08	.13	.06	.09	.04	.08	.04	.06¼	.04¾	.06	.03	.06	.03¼	.07	.04½	.09¼	.08					58,500
Trachyte	1.00	.04¾	.02	.05¼	.04	.05½	.03⅛	.05	.02	.04½	.02	.04½	.02½	.03⅜	.02	.03	.01¼	.03¾	.02	.03⅛	.02¾	.04¾	.03	.03¾	.03⅛	795,000
Union	1.00	.45¼	.38	.60	.40⅛	.54⅜	.42	.47½	.35	.41	.33½	.38	.32	.36⅛	.31	.33¼	.23½	.33⅜	.25	.34	.27¾	.36¼	.29½	.32¾	.25	1,969,501
Virginia M	1.00	.03¾	.02½	.03⅛	.02	.02⅝	.01¼	.03	.008	.02	.008	.02	.009	.01½	.009	.01½	.01¼	.02⅝	.02⅛							119,700
Work	1.00	.26	.19¾	.20¼	.16½	.17¼	.13⅝	.13¾	.09¾	.12⅜	.10¼	.12⅜	.10⅛	.12⅛	.08¼	.08⅞	.06	.09⅛	.06	.09½	.07	.11½	.07½	.09	.08⅛	2,222,150

NOTE.—Total sales for the year, 42,867,424.

throughout the year, and if compared with the years 1892–94 may be said to have been satisfactory to commission brokers, notwithstanding the fact that there were so many more in the business than there had been before the boom.

Interest has been pretty closely confined to the gold mining stocks, as, ever since the great decline in the price of silver in 1893, not only mining operations, but also investment and speculation have been mainly directed toward gold. Of the gold camps Cripple Creek has naturally attracted the most attention, there being comparatively few transactions in Gilpin County shares, which latter, in fact, are for the most part not on the market.

The relative volume of business as compared with that of 1895 may be thus stated: From May 15th, 1895, to the close of that year, the Colorado Springs Mining Stock Association handled 18,721,122 shares of listed stocks, valued at $3,653,150 and 36,357,997 shares of unlisted stocks, a total of 54,979,119 shares. In the same 7 months the Colorado Springs Board of Trade handled 75,991,070 shares, valued at $3,402,126; while there were considerable sales in the Consolidated Exchange in the same city. There were then three exchanges at Colorado Springs, but in the

The Colorado Mining Exchange at Denver is the oldest board of the kind in the State, having been opened in July, 1889, since which date it has had various vicissitudes. Business at this exchange was very dull in 1892-93, but revived when the Cripple Creek boom began and the Leadville gold belt came to the front. In 1896 (to December 19th), the total sales were 142,837,824 shares. The largest week's business was in the week ending January 18th, when 8,271,750 shares changed hands; the smallest, in the week May 9th. The heaviest trading was during January, February and the beginning of March, and again it was fair in October to December. The highest business was during the summer months. The course of prices was the same as at Colorado Springs, and at both places the disastrous fires at Cripple Creek, and the prolonged strike at Leadville had a depressing influence.

Besides these there are the Gold Mining Stock Exchange of Cripple Creek, the exchange at Pueblo, and there have been others of less note in the State.

Colorado mining stocks are largely dealt in outside of the State, in New York City, London, Paris, and even at Shanghai, where Sheridan-Mendota is regularly quoted.

THE HELENA MINING STOCK MARKET IN 1896.

SPECIAL REPORT OF S. K. DAVIS.

The accompanying tabulated statement shows the stocks sold during 1896 in this market. Butte is the only other center for mining stock transactions, although there is some business done in Missoula; the balance of the State as a rule making its transactions in Helena and Butte.

The characteristics of the transactions the past year are hardly in any full sense speculative—the first two years after 1890 settled that. Not only in mining stocks, but other avenues of venture, the dearly bought lesson has had exceedingly good results, for the reason, that the resources and management of mining companies whose stocks are offered are closely looked into, consequently the purchases of stock are, as a rule, made as an investment for dividends, rather than a speculation for a rise, and although the amount realized may not always be as large as the investors desire, still as a fair interest on capital, the average will compare more than favorably with the average investments of the country. Our mines whose stocks are offered to the public, (so far as most agencies are concerned, are well, conservatively, and honestly managed and the chances of loss (there is no absolute guarantee against loss in any investment, mining or other, is reduced to a minimum, through conservative management, while the average of gain is oftentimes very large.

FLUCTUATIONS OF IDAHO AND MONTANA MINING STOCKS DURING 1896.

Name of Company.	Par Value.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Sales.
		H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	
American Dev. Co.	$1	2.00	.....	1.90	.....	.....	.....	2.00	.....	1.90	.....	.....	.....	1.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,600
Bald Butte	1	3.15	.....	3.30	.....	.....	.....	.....	.....	2.75	.....	2.75	2.50	2.25	.....	2.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,046
Bimetallic	5	.....	.....	.....	.....	.....	.....	.....	.....	3.00	.....	.....	.....	.....	.....	2.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	700
Combination	10	.70	.....	.70	.65	.70	.....	.60	.....	.....	.....	.52½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,300
Helena & Frisco	5	.....	.....	.....	.....	.....	.....	2.50	2.00	2.00	.....	.....	.....	3.50	.....	2.25	2.00	2.00	.....	.....	.....	.....	.....	*5.00	.....	539,500
Helena & Victor	5	.....	.....	.30	.25	.50	.45	.50	.45	.40	.35	.....	.....	.30	.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20,900
High Ore		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.50	1.00	1.00	.75	.....	.....	28,100
Iron Mountain	10	.50	.....	.50	.45	.52½	.47½	.50	.47½	.50	.47½	.47½	.....	.42	.41	.42	.41	.42½	.....	.42	.....	.....	.....	.....	.....	204,063
Judge		.....	.....	.....	.....	.....	.....	.07½	.....	.12½	.....	.09	.08	.10	.09	.10	.....	.39	.....	.09	.....	.....	.....	.....	.....	255,850
Merrill (Gold)	1	.....	.....	.60	.....	.....	.....	.55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,500
Ontario	1	.....	.....	1.00	.90	.....	.....	.....	.....	.85	.75	.....	.....	.60	.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13,800
Yellowstone	5	.....	.....	.10½	.....	.12½	.....	.15	.12½	.18½	.....	.20	.....	.20	.16½	.20	.17½	.....	.....	.17	.....	.....	.....	.....	.....	248,500

* 500,000 shares sold in December (half cash, half stock) at £1 per share in London.

For instance, the Iron Mountain Company, whose stock is more largely sold at home than abroad, has paid up to date, 1896, $82,500 and since organization, to date, $492,500; it is true that $27,500 of this was in receivers' transfers to stockholders on the books of the First National Bank of Helena, and it is the opinion of those most familiar with its affairs that it will eventually pay 100 cents on the dollar. The average price of the stock for 1896 has been approximately 45c. per share, which would yield 40 per cent. per annum on the investment.

As the policy of the management is never to accumulate debt, but rather a substantial balance in the treasury, it seems very safe, particularly as the mine makes as good a showing as ever.

The American Development Company is a well-managed institution with large prospects of success. Bald Butte has had large expenses for exploitation of their property, and their earnings have been devoted, since their last declared dividend, June 23d, 1896, to the expenses incurred in that direction. Dividends to that date 13c. per share equals $32,500 for 1896. The stock is held in few hands, and both the mine and management have the confidence of those most interested. The Helena & Frisco has been sold to the Exploration Company of London on the report and advice of Hamilton Smith, and the stock will be listed in London on a new capitalization of 200,000 shares, par value £1. The Castle properties, with the advent of the railroad, have great promise, at present regarded as speculative, but doubtless will some of them, like Yellowstone and Judge, be dividend payers and investment stocks during the coming year.

THE NEW YORK MINING STOCK MARKET IN 1896.

This has been rather a checkered year for the mining stock market here. During the early months of the year, the public apparently devoted more attention to investment in this class of securities, and as a result the highest prices of the year were realized at that time. Many of the optimistic brokers were expecting a boom.

The unfruitful attempts of some Westerners in the spring to organize a mining exchange and carry it through successfully discouraged outside speculation for the remainder of the year. In addition to this the fires at Cripple Creek and the miners' strike at Leadville affected trading, especially in the Colorado stocks, while the downward tendency of the market for silver and lead reacted on many of the other stocks. Wheat speculation during the closing months of the year was also detrimental to the mining stock market, inasmuch as brokers took to this field, considering it more remunerative than their own for the time being.

It is noteworthy, however, that with all the reverses experienced in mining stock speculation the dividends declared by mining companies this year have exceeded those for 1895. Assessments, on the other hand, have also been heavier, chiefly because of renewed activity of the Comstocks in this direction.

Practically all dealings of any account which were recorded this year in New York were made at the Consolidated Stock and Petroleum Exchange, and in only a few cases did the New York Stock Exchange tolerate such transactions.

The first venture in the way of extending dealings in mining stocks this year was the establishment of the New York Mining Exchange, which opened its doors to the public in February, only to close them again after a brief career. This exchange was incorporated in December of 1895, with a capital stock of $10,000, divided into shares valued at $100 each. The incorporators were Henry A. Mott, Edwin A. Beers, James H. Kerr and Edward H. Williams, all of New York. The directors for the first year were these gentlemen and the following: Isham B. Porter, Howard Scrymser, Stephen B. French, W. Leslie Scrymser and W. C. Nicol. Mr. Ogden B. Pell was secretary *pro tem*, and J. H. Kerr treasurer *pro tem*.

One of the foremost promoters of this exchange was Isham B. Porter, of Colorado, who was its president. In his opening address Mr. Porter made a statement of the object and purposes of the exchange, and was followed by Judge J. W. Rucker, of Denver, Colo.; J. W. Deane, of Aspen, Colo.; E. T. Colborn, Salt Lake City, Utah, H. A. Mott, consulting engineer of the exchange, and others. Representatives of various Western mining exchanges, and others interested in the industry were present on this occasion. In the prospectus of the exchange it was stated that no undesirable property would be listed. The classification of securities was as follows: *A*. Those properties which pay regular dividends out of actual net earnings. *B*. Prospects which pay occasional dividends out of actual net earnings, and properties which are developed to a point which affords a reasonable prospect for the early payment of dividends. *C*. Prospects upon which actual development work has been done. No securities could be listed until after the properties represented by them were reported upon by expert and disinterested engineers. In Class *A* the following stocks were listed: Ajax, Bullion-Beck & Champion, Centennial-Eureka, Daly, Gemini, Horn Silver, Mammoth, Mercur, Ontario, Silver King, Eureka Hill and Utah, all in the State of Utah; Anchoria-Leland, Isabella, Mollie Gibson, Pharmacist, of Colorado. In Class *B*, the Colorado stocks were: Argentum-Juniata, Bradley, Pioneer, Blue Jay, Colorado Giant, Cripple Creek Consolidated, Enterprise, Gold & Globe, Insley, Lincoln Boy, Matoa, Trail Run and Work; the Utah stocks were: Daly-West, Golden Gate and Sunshine. Class *C* contained Colorado stocks as follows: Anna May, Apothecary, Atlantic & Pacific, Bill Jim, Cripple Creek Exploration, Constitution, Dictator, Eagle, Elsie, Gold Hill, Gladys A., Investors, Illinois, Justice, Little Carlisle, Mineral Farm, Mic Mac, Mount Rosa, Old Gold, Ophir, Pikes Peak and Summit; Utah stocks were: Alliance, Anchor, Geyser and Marion. The only Idaho stock was Manhattan.

The Exchange had expected to have all the companies on its list appoint transfer agents in this city so as to facilitate business, in order that buyers in New York would have no difficulty in getting the stock transferred in their own names.

That the Exchange did not start right has been proven by the undignified manner in which it carried on business. The promoters were too anxious to receive newspaper notoriety for their Exchange, and in this way they got the most injudicious kind of advertising. This had its effect upon the Exchange afterwards, and we had not long to wait before a rupture took place among the officers and directors. The latter expressed their willingness to resign whenever the members should call for it, and plans were then considered for reorganizing the Exchange. The result was that in March a new board of directors was chosen, consisting of B. A. Ammon, president; C. Vey Holman, vice-president; William Brandreth, treasurer, and O. P. Pell, secretary. On May 4th, however, it was deemed advisable by Justice Truax, of the Supreme Court, to appoint Horatio W. Stocker receiver for the Exchange, application having been made by Directors C. V. Holman, William Brandreth, Horatio W. Stocker, Ella Wooster and W. L. Boyd. They recited the cause to be heavy expenses, actions pending against the corporation on which judgments were to be recovered and other actions threatened. The liabilities were only $5,697, of which $3,541 were contested claims. The nominal assets were $5,358, of which $3,775 was doubtful.

A few weeks after the collapse of this Exchange another one came into the field and formed the American Stock Exchange, to deal in industrial and mining shares. This concern opened its doors on June 15th. The officers were: President, Stephen H. Emmens; vice-president, R. K. Warren; treasurer, J. B. Kellogg; secretary, Alexander Seaman. In his opening address President Emmens laid stress upon the fact that the new Exchange was in no respect a reorganization of the defunct institution. The membership of this Exchange was placed at $100 to $500, with "no other charges of any kind for the first year." The Exchange was incorporated under the laws of the State of New York, with a stock capital of $10,000, divided into 100 shares of $100 each. All securities were allowed to be dealt in on the Exchange without being either listed or called, providing that there was filed in the Recording Department in respect of each such security a statement of particulars for the information of the public, and provided, also, that the accuracy of such statement was certified by two members of the Exchange. Transactions were either "for cash" or "for the account." Those for cash were cleared on the day following the record, while those for the account were cleared on the next "settling day," either on the second or fourth Wednesday of each month. This feature was thought would greatly simplify and facilitate the conduct of business, especially with country clients and distant exchanges, and by enlisting the honor and good faith of the members would afford a much better protection to the public than could possibly be provided by any system of official and necessarily perfunctory investigation and listing. Actual business on the exchange, however,

did not prove satisfactory to its originators; in fact, no business of any account was done. The public simply ignored it.

To complete a trio a new Mining Exchange was born in August, which is said to be free from all doubtful elements. The directors are Stephen V. White and Emery N. Downs, Brooklyn; Irwin C. Stump, Benjamin T. Marten, James R. Branch, William C. Dornin, Moses E. Wooster, Louis Ross and Robert A. Irving, of New York City; George L. Lancon, of Rutherford, N. J.; Malcolm W. Nevin, of Montclair, N. J., and Dr. William Brandreth, of Sing Sing (formerly treasurer of the first mining exchange). The officers are: President, W. C. Dornin; vice-president, Louis

their stock to this side of the Atlantic in order to realize better prices. As a result we record the selling of more shares this year than in 1895. The lowest price in 1896 was in January, namely, $5.25, but it rose again in April and May to $8.50, with a later reaction in December at $6.50. The Victor is a regular dividend payer, and has paid to date over $700,000. The other stocks in this group show fluctuations in prices, with many sales.

Speculation in the Leadville group was hampered to a great extent by the prolonged miners' strike already referred to. Leadville Consolidated ruled at 10@18c. Little Chief opened at 19c., receded to 16c., made an

FLUCTUATIONS OF MINING STOCKS AT NEW YORK DURING 1896.

Name and Location of Company.	Par Value.	January.		February.		March.		April.		May.		June.		July.		August.		September		October.		November.		December.		Sales.
		H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	
Adams (s. l. c), Colo	$10			.30		.25																				2,000
Ajax, Utah	10			.70	.60			1.10																		700
Alamo (g.), Colo	1	.10	.09	.10	.08	.06																		.05		2,700
Alice (g.), Mont	25					.34												.25								1,100
Alliance (g. s. l.), Utah	1			.50																						300
American Flag (s.), Colo	10			.04		.04	.03					.03												.02		8,100
Anaconda (g.), Colo	5	.71	.65	.63		.64						.62				.58	.51	.60		.67	.65	1.45	1.20	1.20	1.05	13,700
Anchor (g. s. l.), Utah	20			2.25		2.40																				300
Andes (s. g.), Nev	100							.50																.16		300
Argentum-Juniata (g. s. l.), Colo	2	.61	.56									.52	.40													1,050
Barcelona (s. g.), Nev	5	.05																								300
Bedford Cons. (g.), Mont														5.00	2.75	7.00		7.38								11,400
Belcher (s. g.), Nev	100					.30		.45	.40	.65	.58	.80	.58	.50	.38			1.00	.60	.65		.52	.31			5,200
Best & Belcher (g. s.), Nev	100	1.00		.82	.75	.70	.25	.65	.48	2.00	53	2.20	1.00	1.75	.85	1.00	.93	1.25	1.00	1.10	1.00	.90		.50		12,500
Bodie Cons. (g.), Cal	100	.40				.33	.17	.45	.25			.68		.55				.70		.70	.64			.70		3,400
Bogan (s.), Utah	1			.11																						700
Bullion, Beck & Champ. (g. s. l. c.), Utah	10			7.25	6.00																					400
Bulwer (g.), Cal	100			.25	.12	.17	.16	.36	.23	.40	.33	.69	.30	.33		.34	.28	.46		.48	.45	.46	.42	.50	.43	16,400
Breece (s. l.), Colo	25	.25						.15				.15								.16		.15				10,400
Brunswick Cons. (g.), Cal	1	.10	.07	.09		.10	.06	.15	.10	.15	.12	.21	.14	.21	.18	.22	.19	.25	.21	.26	.15	.23	.17	.23	.17	173,100
Caledonia (g.), S. D	100			1.06																						10
Catalpa (s. l.), Colo	10					.09																				100
Centennial-Eureka (g. s. l. c.), Utah	50			60.60	60.13																					395
Challar (s. g.), Nev	100			.65		.50	.15	.40		3.30	.70	4.25	2.80	2.80	1.95	2.35	1.90	2.00		2.25	1.80					6,600
Chrysolite (s. l.), Colo	100	.23	.18	.20		.15		.15	.13	.15	.13													.11	.10	19,360
Comstock Tunnel (s. g.), Nev	100	.08	.07	.08	.07	.08	.06	.06		.10	.06	.09	.08	.08	.07	.08	.07	.08	.06	.07	.06	.07	.06	.06	.05	100,200
Comstock Tunnel Bonds	100									.08		.09	.08							.07						8,700
Cons. California & Virginia (s. g.), Nev	100	2.80	2.45	2.15	1.95	1.88	1.55	2.05	1.60	3.60	1.75	3.50	2.00	2.15	1.65	1.95	1.65	2.05	1.70	1.85	.85	1.85	1.75	1.65	1.10	17,425
Cons. Imperial (g. s.), Nev	100	.04		.04		.03		.06		.08	.03	.04		.04		.03										14,450
Creede & Cripple Creek (g.), Colo	1	.20	.07	.08	.07	.08	.05	.06	.05	.05		.15	.05	.08	.04	.08	.06	.09	.07	.08	.07	.08	.07	.08	.06	109,450
Crescent (s.), Utah	25			.05																		.02				1,500
Cripple Creek Cons. (g.), Colo	1	.22	.20	.20						.14		.14		.15	.12	.12	.11	.15	.10	.13	.12	.18	.14	.15	.14	18,000
Croesus (g.), Colo	1	.05	.04	.05	.04	.04	.03	.03		.03		.03		.02				.02	.01	.02		.02		.02		95,700
Crown Point (g. s.), Nev	100	.30				.65	.34	.42	.40	.79	.40	.70	.50	.48		.35	.29	.36		.58	.50			.20	.19	8,650
Dalton (s.), Utah	25			.12	.07																					18,000
Daly (s. l.), Utah	20			7.13																						50
Deadwood-Terra (g.), So. Dak	25				1.00							1.75										1.15				1,300
Dunkin (s. l.), Colo	25					.12	.08																			700
Eureka Cons. (s. l. g.), Nev	20															.28	.25	.26				.35	.20			600
Father de Smet (g.), So. Dak	100					.17		.17	.13	.17						.21	.20							.17		1,100
Favorite (g.), Colo	1			.11																						2,000
Gold Coin (g. s.), Colo	1							.72		.70																250
Golden Fleece (g. s.), Colo	1	1.75	1.60	1.75	1.60	1.70	1.55	1.80	1.65	1.75		1.70	1.50									.95		.95		28,000
Gold & Globe (g.), Colo	1	.26	.23	.24																						1,000
Gould & Curry (s. g.), Nev	100					.35	.30	.50		2.00	.78	2.65	1.30	1.60		.70	.60	.53		.80	.70			.41	.31	4,470
Hale & Norcross (g. s.), Nev	100	1.45		1.25		1.50	1.15	1.45	1.10	3.30	1.35	3.00	1.65	1.35	1.25	1.60	1.15	1.60	1.40	1.60		1.20	.95	.97	.88	9,230
Homestake (g.), So. Dak	100	29.00																								100
Horn Silver (s. l.), Utah	25	2.30	2.25	2.10	2.00	2.10	2.00			2.30	2.20	2.25	2.20	1.95	1.75					1.50		1.60	1.55			4,050
Iron Silver (s. l.), Colo	20	.20				.25	.23	.24	.20	.24	.18	.19	.18	.95	.25	.80	.20	.50	.32			.45	.40			15,200
Isabella (g.), Colo	1	.63	.60	.58	.49	.60	.50	.56	.52	.58	.54	.65	.59	.64	.58	.46		.44		.45	.37	.39				17,200
Julia (g. s.), Nev	100									.56																300
Kingston & Pembrooke (i.), Ont	10	.23	.20	.25		.25				.25				.14				.15						.34	.25	3,600
La Crosse (g.), Colo	10	.10	.09	.09		.10		.11	.09	.10				.08		.09	.08									8,600
Leadville (g.), Colo	10	.12	.11	.18	.12	.15	.14	.15	.13	.14	.12	.14	.13			.12				.11	.10					39,100
Little Chief (s. l.), Colo	50			.19		.18	.16	.19	.18	.19	.16	.20	.18	.18	.16	.16				.19	.18	.15				14,320
Mercur (g.), Utah	25			7.38	6.88																					200
Mexican (g. s.), Nev	100	.75	.65			.65	.36	.70	.35	1.20	.45	1.40	.84	.75	.70	.65		.60	.45	.50		.66	.47	.50	.38	10,200
Mollie Gibson (s.), Colo	5	.51	.45	.48		.75		.75				.75								.42						2,650
Mono (g.), Cal	100			.17	.16															.25				.23		1,700
Moulton (s. g.), Mont	5			.30						.30																300
Mt. Rosa (g.), Colo	1	.18		.17	.15	.16	.12	.13	.08	.10	.08	.16	.09	.14	.12	.13	.12	.19	.11	.20	.16	.17	.15	.15		45,850
Nevada Queen, Nev	100																							.06		100
Occidental Cons. (g. s.), Nev	100			1.00		1.00	.85					1.50	1.25	.80												2,100
Ontario (s. l.), Utah	100	11.00	7.50	11.25	11.00			15.00	13.50									10.00				10.00		10.50		950
Ophir (g. s.), Nev	100			1.20		1.30	1.20	1.20	1.05	2.50	1.25	2.40	1.30	1.30	1.00	1.10	.95	1.20	.95	1.30		1.25	1.20	1.00	.80	7,700
Overman, Nev	100																							.05		100
Pharmacist (g.), Colo	1	.20	.14	.18	.14	.16	.11	.11	.09	.10	.07	.09	.08	.10	.08	.10	.08	.11	.04	.14		.20	.15	.15	.13	59,600
Phœnix Cons. (g.), Ariz	100	.12	.07	.08						.03		.03						.06	.04	.07	.06	.20	.03			24,700
Plymouth Cons. (g.), Cal	10					.20		.12																		100
Portland (g.), Colo	1	1.90	1.80	1.85		1.65	1.42	1.50	1.30	1.55	1.45	1.90	1.70	1.45		1.15	1.00	1.35		1.50	1.30	1.40	1.25	1.35	1.25	11,580
Potosi (g. s.), Nev	100	.65	.55	.55				.30	.20	1.55	.34	1.60	1.50	1.30	1.05	1.10		.90		.85	.60	.74		.54		7,100
Quicksilver (q.), Cal. (com.)	100	3.00																				2.00				300
Quicksilver (q.), Cal. (pref.)	100																			18.00						100
Rover (g. s.), Utah	10			.80																						100
Savage (g. s.), Nev	100			.45	.40	.36	.30	.27		1.30		2.05	1.50	.70	.54	.70		.55		.50	.45	.70	.55			5,300
Sierra Nevada (g. s.), Nev	100	.65		.87	.40	.75	.60	.75	.60	1.45	.65	1.15	.70	.60	.55	.70	.45	.60		.70	.60			.40	.38	16,865
Silver King (s.), Utah	20			3.75																						400
Small Hopes Cons. (s. l), Colo	20	.90	.85	.95		1.05	.95	.90		.90		1.75				.70	.65									4,700
Specimen (g.), Colo	1											.08														300
Standard Cons. (g. s.), Cal	100	1.85	1.10	2.20	1.90	2.25	1.80	2.15	1.75	2.25	1.90			1.45	1.30			1.00				1.50	1.25	1.30		10,000
Sunshine (g.), Utah	10			3.50																						300
Syndicate (g.), Cal	100																	.02		.04	.02	.04				4,950
Tetro (s.), Utah	1			.05																						300
Union Cons. (g. s.), Nev	100	.50	.40	.40	.30	.76	.45	.65	.38	2.10	.50	1.20	.65	.53	.34	.50	.21	.44	.26	.52	.30	.60	.50			31,150
Union Gold (g.), Colo	1	.43						.44	.43	.90	.40															3,900
Utah Cons. (s.), Nev	100											.19	.16											.38		3,000
Victor (g.), Colo	5	5.50	5.25	6.68	5.63	6.75	6.28	8.50	6.75	8.50	8.00	8.00		7.25	6.50	7.00		7.00	6.88	7.00	6.75	7.00	6.75	6.75	6.50	17,040
Work (g.), Colo	1			.20		.17		.15	.13																	3,070
Yellow Jacket (g. s.), Nev	100	.50	.45			.45	.38	.40	.32	.90	.40	.75	.55	.47	.42			.35	.20	.65	.25	.52	.40	.43	.27	7,350
Total shares sold																										1,117,815

Ross; treasurer, William Brandreth; secretary, Moses E. Wooster; chairman, John Gray. This concern is said to be modelled after the New York Stock Exchange, but is not yet active.

Business on the Consolidated Exchange.—Of the Colorado stocks the Cripple Creek group was the most active. The highest prices were realized in January, while the latter months of the year showed decreases; although the month of September did record the largest output of ore in the history of the camp—amounting in value to $817,000. This class of mining stocks attained quite a satisfactory total in dividends during the year, as will be seen by our tables elsewhere.

The stock of the Victor Gold Mining Company is held principally by a French syndicate which has listed it on the Paris Bourse. The depression in that market in certain months of the year caused some holders to send

advance of 4c., and in November closed at 15c. The most active stock in this group was Iron Silver, which advanced to 95c. in July—the highest price since 1891, when the stock sold for $1.45. The major portion of this company's stock is held by Detroit capitalists. Life was put into these apparently dead shares by the favorable termination of seven years' of litigation between the Iron Silver Mining Company and other claimants over the Sierra Nevada property. This ground was claimed by the Iron Silver Company under the company's titles, and in July of this year the Supreme Court ordered that the property in dispute be restored to that company. Up to April, 1889, the company had worked so profitably as to distribute $2,500,000 in dividends, but it paid nothing to its stockholders during the litigation.

Small Hopes was rather active; the highest price attained this year

was in June when the stock sold for $1.75. In August, however, it declined to 65c.

Application for listing was made in September by the Red Mountain Mining Company to the Consolidated Stock and Petroleum Exchange. The company's prospect is in the Red Mountain mining district of Ouray and San Juan counties, Colorado The company is capitalized at $200,000, and the par value of shares is $1. The Committee on Mining Securities at the Exchange after due consideration decided not to list any more prospects with little or no development, as they were likely to cause illegitimate stock speculation.

The Comstocks are falling off in favor with the New York public, and are now regarded by many as old stocks. Revival in their speculation can be looked for only when the low-grade deposits on the Comstock and Brunswick lodes are worked in a cheap and profitable way.

At the annual meeting of the Comstock Tunnel Company held in New York in October, the following officers were elected: Directors, R. Hobart Smith, Franklin Leonard, Ambrose Leonard, Gordon Macdonald, Maurice L. Muhleman, Henry H. Truman and Nigel B. Gresley. Mr. Franklin Leonard was re-elected president. In the statement for the year ending August 31st, 1896, the revenue of the company from royalties showed a large falling off. This is due to the partial suspension of operations in the mines tributary to the Sutro tunnel. The gross receipts were only $23,500, while the operating expenses for the year were cut down from $20,000 to $16,000. Comstock Tunnel stock ruled somewhat lower in price; it receded from 10c. in May to 6c. in October. Bonds to the amount of $8,700 were sold at 7@9%.

Chollar made a notable advance. In May it sold for $3.30—the highest price since 1891, when it was $3.80. The lowest point reached in 1896 was in March, namely, 15c. The reported rich strikes in this mine account for the increased value of the stock. Gould & Curry made a fair time ago. The influence of this consolidation on the mining stock market was notable in several instances. In the case of Standard Consolidated the highest price realized was in March, $2.25, but in September when some dissatisfied stockholders placed their holdings on the market it fell to $1.60. In November, however, the stock rose again to $1.25. On the other hand, Bulwer Consolidated, Bodie Consolidated and Mono Consolidated each showed advances from the opening of the year to the time of consolidation.

The Utah stocks were in more demand this year than they were in 1895, and prices have been fairly steady. As these are silver-mining stocks principally, their speculation depends to a great extent on the market for the metals silver and lead. From February until July, when the metal market showed steadiness and advanced prices, the market for mining stocks was also active and realized the highest prices of the year. This good feeling, however, did not continue long after the close of July, as both markets began to decline, and it was during this period that the mining stocks sagged. Centennial-Eureka, a high-priced stock, was offered sparingly this year, and the only sales recorded were made in February at $60.13 to $60.60. This tightness of stock is in part accounted for by the reported sale of the mine in England for several millions of dollars. The company pays regular dividends, and has paid to date nearly $2,000,000, which is another reason why stockholders are not selling lavishly.

Ontario and Daly, two Park City properties, were dealt in to a limited extent only. Reported new strikes in the Daly mine eased the market for this stock as regards buyers, but not sellers, and in February it sold for $7.13—the only sale this year. Ontario advanced from $7.50 in January to $15 in April, an increase of $5 over 1895. Horn Silver ruled lower in price this year, owing to the passing of a few dividends. This was accounted for by the eight-hour law strike in the mine, and by the fluctua-

PRICES OF INDUSTRIAL AND COAL STOCKS DURING 1896.

Name of Company.	Par Value.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Sales.
		H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	
Acety., L. H. & P...	$25	22.00	10.00	23.50	20.00	20.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.00	.....	.....	.....	.....	.....	.....	.....	673
Baltimore & Ohio..	100	44.00	36.00	41.00	21.63	20.00	13.00	19.00	16.13	16.75	12.00	19.25	16.75	18.50	15.50	16.00	12.25	14.50	10.50	15.50	13.50	18.00	15.75	17.00	12.50	360,157
Cambria Iron.....	50	48.00	40.50	47.25	44.50	46.75	39.88	43.00	41.00	43.00	40.00	45.00	40.00	40.00	35.00	44.00	34.00	44.00	35.50	41.00	39.00	47.75	39.75	44.00	42.50	12,793
Chesapeake & Ohio	100	16.25	13.00	18.13	13.00	17.00	14.25	18.13	16.00	17.50	16.38	16.88	13.13	14.88	12.13	13.50	11.00	15.75	13.00	16.13	13.38	18.50	16.13	17.13	15.00	204,471
Choc. & Glf. Ctfs..	50	12.75	8.75	9.75	7.50	8.13	6.38	9.00	5.00	8.50	6.00	7.75	5.25	6.75	5.00	5.50	4.00	7.00	4.80	7.50	.....	8.38	7.25	8.00	7.13	85,135
Colo. Fuel & Iron..	100	28.50	23.38	.....	.....	32.00	26.00	32.50	27.00	31.00	26.50	29.00	22.00	22.25	16.00	18.88	14.63	21.50	17.00	20.75	16.50	28.25	19.50	25.75	22.00	110,780
Col., H. V. & T....	100	18.75	15.00	18.50	16.50	17.50	15.00	18.50	15.50	17.25	16.00	17.50	14.50	17.25	15.00	15.00	12.50	15.88	13.00	17.00	15.00	20.50	16.25	19.75	16.50	84,547
Cons. Gas, N. Y....	100	.....	.....	161.88	154.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100
Del. & Hudson.....	100	129.13	119.75	130.00	126.50	128.25	125.50	128.13	126.00	128.00	125.38	127.75	124.25	125.00	115.50	119.75	115.00	124.88	118.25	124.75	119.63	128.88	124.00	128.25	124.38	58,688
Del., Lac. & West..	50	164.00	155.88	163.75	160.63	162.50	160.13	161.50	159.13	161.75	159.00	164.00	159.88	160.50	146.00	150.00	138.00	158.00	150.00	156.75	152.75	160.50	156.00	160.25	155.00	35,327
General Electric...	100	27.88	22.00	33.50	27.50	30.50	21.75	38.75	36.25	36.88	33.25	34.63	27.00	27.63	20.00	24.63	21.13	29.50	23.50	29.50	24.50	35.50	29.25	33.88	29.00	754,556
H. & Br. Top.....	50	31.00	28.00	29.75	29.00	.....	.....	28.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	27.00	24.00	24.50	23.25	25.00	24.00	24.75	24.50	1,138
H. & Br. Top, pref..	50	53.00	51.00	52.50	51.50	52.00	51.75	53.25	51.00	52.50	52.00	52.50	52.00	53.00	51.75	50.00	48.75	49.25	48.50	50.00	49.00	50.50	49.75	51.00	.....	1,679
Lake Erie & West..	100	21.88	18.00	22.50	20.50	20.50	17.50	21.00	17.50	19.75	16.63	19.75	17.25	18.25	13.25	14.88	12.13	16.75	14.75	18.00	14.75	20.75	18.00	19.25	18.00	23,834
L. E. & W., pref...	100	74.00	64.63	75.13	73.00	75.00	69.75	73.50	69.75	72.38	69.75	72.00	69.00	70.38	60.00	63.75	55.50	68.75	63.00	68.75	58.50	73.75	69.25	73.00	69.50	26,691
Lehigh C. & Nav...	50	46.00	42.00	56.00	43.38	45.25	41.50	43.50	41.50	42.50	39.00	43.00	40.00	43.25	38.00	39.00	35.00	42.00	39.00	43.00	41.00	45.25	41.00	51.50	40.00	9,347
Lehigh Valley.....	50	38.50	35.00	38.25	36.00	36.50	34.00	36.00	34.25	35.00	33.75	34.25	30.50	33.00	30.00	31.00	28.00	30.13	29.00	30.25	28.00	34.25	30.13	33.00	30.00	68,251
Little Schuylkill...	50	65.00	62.75	64.50	.....	.....	.....	65.50	63.50	63.50	63.00	63.50	.....	.....	.....	60.00	59.88	.....	.....	60.00	59.00	.....	.....	50.75	.....	471
National Lead. ...	100	26.88	23.00	28.50	25.00	24.88	22.50	28.63	24.00	26.75	24.00	26.50	23.13	23.00	18.75	19.00	16.00	23.00	19.00	25.50	19.25	28.00	24.50	25.63	23.13	105,233
Nat. Lead, pref ...	100	88.00	82.50	90.25	86.25	87.75	85.50	92.00	86.50	92.00	90.00	90.50	85.00	86.25	79.00	88.00	76.50	85.00	78.00	89.00	82.00	92.75	88.00	90.00	86.00	27,716
N. J. Central.....	100	108.50	94.75	109.00	104.50	108.50	104.00	109.25	105.88	107.50	103.75	108.00	102.25	103.25	87.75	95.00	87.50	104.75	94.25	104.50	98.00	110.00	101.00	105.00	101.50	189,216
N.Y., L. E. & W....	100	16.50	13.50	17.63	15.88	16.50	14.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16,259
N.Y., L.E.&W., pref	100	25.00	23.00	29.00	26.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,170
N.Y., Ont. & West..	100	15.75	12.50	15.88	15.00	15.25	14.00	15.25	14.13	15.13	14.25	14.88	13.00	14.00	12.13	12.63	11.13	14.38	12.25	14.50	13.00	16.88	14.38	16.00	14.00	148,693
N.Y., Sus. & W.....	100	11.50	8.25	12.00	9.50	10.13	7.75	9.00	8.00	9.50	8.50	9.00	8.00	8.50	7.25	8.00	6.00	9.13	7.50	9.00	7.25	12.00	9.00	10.00	9.50	39,771
N.Y., Sus.&W., pref	100	30.25	21.50	31.25	27.00	28.00	21.50	25.50	21.75	25.25	23.50	25.25	21.88	22.50	17.00	18.25	12.00	23.88	19.00	24.75	19.50	30.00	24.75	27.00	24.00	153,838
Norfolk & Western.	50	2.38	1.50	3.25	2.63	2.50	1.63	1.50	1.13	2.25	1.13	4.75	4.00	6.00	2.50	8.25	8.00	9.75	8.50	11.00	9.75	12.75	11.25	.....	.....	8,518
Norf. & West., pref.	50	8.25	6.13	9.25	8.00	7.50	6.00	6.13	4.50	8.50	3.75	10.75	9.75	11.75	8.75	13.38	11.00	13.88	13.50	16.50	14.25	19.75	17.00	17.13	.....	7,921
Pennsylvania R. R.	50	52.25	50.00	.....	.....	.....	.....	.....	.....	.....	.....	53.38	52.25	53.00	50.38	51.00	49.00	52.00	50.13	52.50	51.25	53.00	51.88	52.25	51.75	92,774
Pa. Salt Mfg. Co...	50	.....	.....	.....	.....	103.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	101.00	99.00	.....	.....	.....	.....	64
Pennsylvania Steel.	50	35.00	25.00	35.00	30.00	33.00	25.00	30.00	26.00	26.50	25.50	25.00	.....	25.00	20.00	21.75	20.00	30.00	25.00	35.00	27.00	39.50	36.00	.....	.....	3,558
Pa. Steel, pref.....	50	65.00	60.00	65.00	.....	55.00	.....	60.00	59.50	57.00	54.00	57.50	52.00	51.00	.....	40.00	.....	55.00	40.00	62.50	57.00	70.00	.....	.....	.....	860
Phila. & Reading..	50	15.00	2.38	15.00	11.50	12.25	9.75	13.13	10.25	13.00	9.88	16.00	7.75	14.25	10.00	10.50	5.88	20.00	17.63	27.50	18.00	31.75	27.38	29.88	23.13	2,142,480
Tenn., Coal & Iron.	100	29.00	23.00	34.13	29.00	31.50	24.75	32.00	28.75	30.50	25.13	27.00	21.25	21.75	13.00	17.63	14.00	23.25	17.25	25.13	19.88	32.50	25.00	29.63	24.00	884,917
United Gas Imp....	50	69.00	66.25	70.25	66.50	70.00	66.00	71.25	68.50	73.50	70.25	71.75	70.00	68.00	62.50	65.00	58.00	68.50	63.00	69.00	66.75	74.50	69.50	73.88	71.50	43,064
Welsbach, Can.....	5	2.75	2.50	2.75	2.50	2.50	2.00	3.25	2.13	2.75	2.13	5.00	2.00	2.13	1.50	1.75	1.13	2.00	1.13	2.00	1.38	2.50	1.88	2.13	2.00	13,116
Welsbach, com....	100	40.00	38.00	42.00	38.00	39.00	38.00	38.00	35.00	30.00	.....	30.00	20.00	20.00	14.50	17.00	15.00	25.00	20.00	23.00	17.50	30.00	20.38	.....	.....	4,084
Welsbach, pref....	100	74.88	73.88	77.00	74.00	72.00	68.88	69.00	67.50	68.00	65.00	64.00	.....	59.00	50.00	60.00	53.00	60.75	59.75	65.00	60.00	70.00	65.00	66.00	62.00	4,191
Welsbach Light....	5	57.50	49.88	67.00	57.00	62.50	56.50	60.50	58.00	58.50	50.50	51.50	47.00	45.00	34.50	40.00	35.00	44.50	39.00	45.00	40.00	57.00	44.50	48.50	39.00	26,449
Westmorel'nd Coal	50	52.00	50.13	52.50	51.50	.....	.....	51.00	50.00	50.00	.....	.....	.....	.....	.....	50.00	48.00	48.00	.....	47.00	.....	50.00	.....	50.00	47.25	364
Wheel. & L. E.....	100	12.25	10.00	13.25	10.75	11.88	8.25	11.63	9.25	10.88	9.50	10.63	8.50	9.50	6.63	7.63	5.25	6.75	5.88	6.50	5.38	9.25	6.50	8.63	7.00	77,685
Wheel. & L. E., pref	100	38.00	34.50	40.38	37.50	38.25	31.75	38.00	31.75	37.63	35.00	37.00	34.00	33.63	23.75	25.25	21.00	27.00	23.38	29.25	24.88	35.50	29.25	32.13	28.25	21,273

NOTE.—Total sales for the year, 5,852,202.

showing, realizing $2.60 in June—the highest since 1891, when it sold for $3.80. The lowest figure in 1896 was 30c. during the month of March. Hale & Norcross showed transactions in May at $3.30—an increase as compared with the last six years. In 1892 it sold for $3.40. In December, 1896, the stock sold as low as 83c. The advanced price, early in the year, was due to rich strikes reported in neighboring mines on the Comstock lode.

Consolidated California & Virginia sold up to $3.60 in May. Two months before, however, it was selling at $1.55. At the close this year it sold for $1.10 to $1.65. Savage advanced from 27c. in April to $2.05 in June, closing at 55c. in November.

With few exceptions the California stocks were rather active, while prices ruled somewhat lower than in 1895. Brunswick Consolidated was the stock most dealt in, it sold as low as 6c. in March, and as high as 26c. in October with heavy transactions.

The deal to consolidate the mines of the Standard Consolidated, the Bulwer Consolidated, the Bodie Consolidated and the Mono companies was agreed upon during the latter months of this year, and the new organization is now called the Standard Consolidated Mining Company of Bodie. Its stock capital is 200,000 shares, of which the Standard Consolidated stockholders get 95,000 shares, the Bulwer Consolidated, one share of the new stock for every three held (33,000 shares in all), Bodie Consolidated, one share for every two held, and Mono Consolidated, one share for every six of its own. After the distribution of these shares the remaining stock in the treasury of the company will be used in the purchase of additional ground. The properties formerly held by the different companies mentioned are now owned by the Standard Consolidated Mining Company. This consolidation had been expected ever since the stocks of all the Bodie companies passed into the hands of one party some tions in the market for silver and lead. The stock sold at $2.30 in the first half of this year, but dropped to $1.55 in November.

The South Dakota stocks show only moderate dealings and lower prices in several cases.

There was more attention paid to Montana stocks this year. Stock of the Bedford Consolidated Mining and Smelting Company was placed on on the Consolidated Stock and Petroleum Exchange in June. These shares sold at the opening for $2.75, but near the close of the year were sold at $7 to $7.38 in consequence of a corner on the part of some stockholders who knew the shares were tightly held. These parties, when called upon, refused to deliver the stock, which made it necessary for it to be bought in under the rule on account of the party selling.

A call for certain stocks not on the regular list of the Consolidated Exchange early in the year induced its Committee on Mining Securities to place the following stocks on the "temporary" list: Alamo Mining Company, Anaconda Gold Mining Company, Ajax Mining Company, Anchor Mining Company, Alliance Mining Company, Bullion-Beck & Champion Mining Company, Cripple Creek Consolidated Mining Company, Creede & Cripple Creek Mining and Milling Company, Crœsus Gold Mining and Tunnel Company, Centennial-Eureka Mining Company, Daly West Mining Company, Favorite Gold Mining Company, Gold & Globe Hill Mining Company, Mount Rosa Mining, Milling and Land Company, Mammoth Mining Company, Mercur Gold Mining and Milling Company, Pharmacist Mining Company, Rubicon Gold Mining Company, Silver King Mining Company, Sunshine Gold Mining and Milling Company, Specimen Gold Mining and Milling Company, Union Gold Mining Company, Work Mining and Milling Company. The major portion of these stocks belong to Colorado, principally to the Cripple Creek Mining District. On August 25th the Fortuna Gold Mining and Milling

Company was added to the permanent list, and on June 26th the Bedford Consolidated Mining and Smelting Company, of Montana, was appended to the regular list of the Exchange. The following stocks were stricken from the temporary and regular lists during the year: Bogan Silver, Dalton Gold, Mercur Gold, Tetro, Rover Gold (all of Tintic Mining District, Utah), Argenta, Bechtel, Bradshaw, Consolidated Pacific, Carson River Dredging Company, Columbia Mining Company, Del Monte, Diana, Excelsior Gold and Silver Mining Company, Elko, Emmett Water and Mining Company, Freeland, Found Treasure, Grand Prize, Gold Stripe, Kossuth, Martin White, Monitor, Mutual Smelting and Milling Company, Mount Diablo, North Belle Isle, Proustite, Reward Mining and Smelting Company, Sutro Tunnel Company, Sutro Tunnel Trust Certificates, Swinam, San Sebastian, Sullivan, Scorpion, Tioga, United Copper. There were placed on the suspended list the following: Augusta Mining and Investment Company, stock and bonds, Colchise, Helena, Holyoke, Hestor, Less Basin Mining Company, Monte Christo, Oriental & Miller, Plutus, Robinson Consolidated, Ruby Silver Mining Company, stock and bonds, Stormount, Silver Queen, Santiago, Shoshone, Trio, Tornado, Columbia & Beaver, and Cleveland Tin Mining Company.

The Consolidated Stock and Petroleum Exchange is making an effort to weed out all undesirable stocks, and to replace them by favorites. Many of the stocks that are to be dropped from the list of the Exchange have not been traded in for many months, and in some cases for years.

Year by year the reported sales of mining securities have grown smaller, and 1896 would doubtless have been as bad as its predecessors had not the Cripple Creek stocks been traded in. The transactions on the Consolidated Exchange for the last nine years are given in the table below:

Year.	Shares sold.	Year.	Shares sold.
1889	4,114,480	1893	624,617
1890	3,9:5,923	1894	302,372
1891	2,5?2,6?0	1895	678,925
1892	1,527,371	1896	1,117,815

The year 1897, it is hoped, will record a slight increase in the total sales of mining shares.

Much of the trading in these securities which had been centered in New York years ago is now gradually disappearing. In the majority of cases speculators prefer to deal direct with brokers who are at or near the mines in whose shares they want to invest capital. It is stated by brokers here that many of the companies which offer their shares on sale in New York are overstocked. This naturally causes investors to act cautiously when they make purchases of this class of securities.

FLUCTUATIONS OF PRICES IN MINING STOCKS AT PITTSBURG DURING 1896.

Company.	Par Value.	Opening.		Highest and Lowest During the Year.				Closing.	
				Bid.		Asked.			
		Bid.	Asked	Highest	Lowest.	Highest	Lowest.	Bid.	Asked
Coal—									
Mansfield C. & C., Pa.	$50	.....	37½	.....	.....	37½	.....	.....	.....
New York Gas Coal	50	.....	.....	40	37¾	40	.....	.....	.....
Lustre, Mex.	10	13¾	14½	13¾	8	14½	9¾	7	.....
Natural Gas—									
Chartiers Valley	100	6½	7	6	4½	10	5	.....	6
Manufacturer's, Pa.	50	.....	45	50½	45	54	45	.....	.....
People's Natural Gas, Pa.	50	25	.....	31	25	32½	27½	.....	.....
People's Natural Gas and Pipeage, Pa.	25	.....	14½	14¼	12⅜	15⅝	13	14	14¾
Pennsylvania, Pa.	50	.....	.....	5	3	6⅝	5½	6	6½
Philadelphia, Pa.	50	17½	18⅛	20½	16¼	20⅞	17⅜	17	18
Wheeling, W. Va.	50	16⅛	18	.....	18½	19	17¾	18	18½

THE SALT LAKE CITY MINING STOCK MARKET IN 1896.

SPECIAL REPORT OF JAMES A. POLLOCK.

Utah's mining share market during the year 1896 reflected practically all the conditions predicted by me in my summary of a year ago. More attention was given to the meritorious mining securities in this State by outside investors, both foreign and domestic, than for many years past, if not more than for any previous year. Outside investors turned largely to the dividend-paying stocks, the speculatives naturally receiving the most attention at the hands of local operators. As has been said many times, this market is more of an investment than a speculative one, and while quotations often fluctuate somewhat wildly, these violent alterations are more the result of a small, sensitive market than any real changes in the properties affected. In Utah there have been few examples of stock manipulation, and this sort of thing is most seriously frowned down by the genuine mining operators. Investors in Utah stocks of accredited standing may rest assured that their interests will receive the same care and attention at the hands of the company managements as do those of the heaviest stockholders.

Almost without exception Utah's mining companies are honestly and conservatively managed, and there is little or no waste of company funds or energy. The year 1896 has been a splendid one for Utah's listed stocks in a dividend way, five new companies having entered the dividend list and two old-time payers having resumed payments. The total amount paid in dividends by the listed stocks during 1896 was $2,384,500, swelling the total to $32,368,500, with the total of many private payers not included in the list. In point of amount paid during 1896 the Centennial-Eureka leads with $450,000 to its credit, closely followed by the Silver King with $412,500; then the Bullion-Beck with $295,000, the Eureka Hill with $250,000, the Mercur with $225,000, the Gemini with $200,000, and the Ontario with $180,000. The new payers were the Dalton & Lark, Sacramento, Swansea, South Swansea and Utah Consolidated, while the Mammoth and Ontario resumed payments after several years' lapse. Daly also resumed dividends, but made only one distribution, that in August. There is no doubt but that the list of dividend payers will be still further augmented before the new year is many months old. Dividends paid by Utah mining companies producing silver, lead and copper are now the result of only the most economical management.

Several heavy deals in Utah mining properties reached a successful culmination during 1896, while a number of additional sales of great magnitude are now pending. Among those successfully closed were the sale of a large portion of the capital stock of the Sevier Gold Mining and Milling Company, the sale of a half interest in the capital stock of the Sacramento Gold Mining and Milling Company and the transfer of the Highland Boy group at Bingham. Several important options are now pending and are expected to be taken up shortly after the first of the year.

Conditions surrounding Ajax have improved very materially and the stock closes the year in splendid shape. All mortgages against the property have been paid and the company's treasury is fast getting into dividend condition. The stock made decided gains during the year, with the tendency still upward. Regular and heavy shipments of high-grade copper, silver and gold ore are coming from the properties.

Alliance has been dead and still continues in that condition. There are practically no buyers in the field, and the stock closes at the lowest point in its history. Some development work is being done by the company, but heavy litigation has interfered with the operations. No new assessments were levied.

With all work suspended at both mines and mill, Anchor ends the year in not very encouraging condition. The mines show good quantities of milling ore, and when the contemplated Peck concentrator is completed at Park City, the company will doubtless take on a new lease of life and activity. Stockholders have the greatest faith in the company and sellers are comparatively few. From $2.25 at the first of the year the stock has declined to $1.00.

Bogan has had an uphill course and at the close is without its old-time activity. No work is now being done at the properties and more assessments will be necessary before development work can be resumed. It seems not at all unlikely that the control will change within the next few months, and should such be the case the further prospecting of the company's ground will be carried on in a much more satisfactory manner. The stock was up and down several times, but closes at a very low ebb.

With dividend payments aggregating $295,000 for the year, Bullion-Beck closes a splendid record. Conditions are such at the mines that dividends seem assured for years to come, developments in the deepest workings of the properties having shown up some great bodies of high grade ore. On the average market value of the stock the company paid nearly 50% in dividends in 1896, which has been its record since 1893. During the summer months the stock declined somewhat, but ends the year about where it opened in January.

Centennial-Eureka attracted great attention at the hands of investors by reason of its regular and heavy dividend payments. The stock advanced to above $75 per share, a gain of over $15, and closes the year practically out of the market, on account of a pooling of interests. For 1896 the company paid $450,000 in dividends, regularly $1 per share monthly, or $30,000, and several times $2 per share. The properties never were in better condition than at present and the outlook for the future is extremely bright. Conservatively and honestly managed, the Centennial has highly gratified its stockholders and surprised the general public.

Dalton did little during the year. The stock sold down to its lowest point and has not recovered materially, now going around 3c. Work of a developmental nature has been prosecuted continually during the year, but there has nevertheless been little change in condition at the mines. Part of the company's ground has been leased and work is being pushed by the lessees. Two assessments of 1c. each have been levied.

With the settlement by contract purchase of its legal difficulties with its neighboring companies, the Dalton & Lark Company placed a portion of its capital stock on the market at 50c. Dividends of ½c. per share commenced at once and were continued for six months, when a suspension was ordered by the directors on account of the low price of the metals. Very little of the stock was taken by local investors, but it is understood that the promoters placed considerable of it in the East. The company is too heavily capitalized, having 2,500,000 shares, and this is one reason the stock never took with home buyers. Very light inquiry and fairly heavy offerings caused the close to be weak, the stock being offered as low as 30c.

Stockholders in the Daly were very agreeably surprised in August by the payment of a dividend of 25c. per share. It was then supposed that payments would be repeated at least quarterly, as the company is known to have a very handsome surplus, but to date no further announcements of dividends have been made. The stock fluctuated considerably and closed nearly $1 a share under the opening. At the properties work is progressing favorably and the drain tunnel has passed shaft No. 2.

Daly-West made heavy gains, as the result of an improved showing at the properties and an increase in interest by investors. The Daly-West group is a great property, and destined to become a splendid dividend payer. As the name indicates, it lies west of the Daly, and has both the Ontario and Daly veins. The stock showed gains of $1.50 for the year, closing above $8.

Since early in the year no work has been done at the Eagle and the stock came down from 25c. to 5c., with no activity. The properties are located in the Mercur District.

Starting at 50c., boomed by "wash" sales and matched orders to 60c. and then gradually declining to ½c. per share, with a pending assessment of that amount, is the history of the East Golden Gate stock. As was the case with Dalton & Lark, little of this stock was sold here, but great quantities were placed throughout the East and West at 50c. and 60c. per share. The company owns two claims in the Mercur District and sank 1,300 ft. with a 6-in. drill, in the hopes of striking the vein, but secured no pay values. The chief promoters of the company, and, seemingly at least, the only people who made any money out of the deal, except the original holders of the ground, have changed their base of operations to San Francisco. An assessment of ½c. per share has just been levied to pay debts against the company. A very good hoisting plant is on the company's ground.

There was little real change between the opening and closing price of Four Aces. At one time, just after the close of the sale of treasury stock, an advance to 45c. resulted from speculative buying, but the inevitable break came and the stock sold down to 10c., recovering to 20c. The

company is working its claims in the Tintic District energetically, and makes occasional shipments of silver-lead ore. With depth the ore showing is expected to very materially improve, as has been the case with both its neighbors, the Swansea and South Swansea.

Although the Galena sustained a slight loss in quotations, there was no good reason, as the company paid regularly its dividend of 5c. per share, paying a total of $55,000, and the ore showing at the mines continued to be very satisfactory throughout the year. The company contemplates some important improvements for 1897, including a new steam hoist and a new working shaft. At one time, early in the year, the stock sold above $2, but closed about $1.50. It was March before the stock became at all active.

In January the Geyser came onto the market at $1.40 per share, but this figure was not long sustained, the close being about $1, with the tendency upward. The company owns properties in the Mercur District and its 50-ton mill has just been increased to a daily capacity of 100 tons. The management expects to commence dividend payments about February.

Horn Silver paid but one quarterly dividend during the year, that in January, of 12½c. per share. The company continued operations throughout the year and rebuilt its surplus fund, although evidently not sufficiently to merit a continuation of dividends. The ore showing at the mines has improved during the year.

The market price of Lucky Bill was almost doubled, as the result of the uncovering of ore bodies in the properties. The usual 2c. assessment came regularly until December, but it is thought the company will soon be self-supporting.

Commencing in May, the Mammoth resumed dividend payments. In certain quarters a dividend of at least 10c. per share was expected, and on these expectations the stock sold up as high as $4, but a break came and the fluctuation carried the security down as low as $1.50, with variations. The company paid an even $100,000 in dividends, and in October ceased payments in order that some heavy improvements at its properties might be made. Two increases in the stamp capacity of the company's mill were made, and Mammoth commences the new year in good shape, with the stock advancing. An option running until February has been given on the control of the company.

After the first few months of the year, Morgan (Meears) did little and the stock suffered materially. The company owns good ground at Park City, but on account of the low prices of the metals is not working very extensively. At the close Morgan was offered at 20c.

Mercur maintained its dividend record in good shape, and the stock was much stronger at the close than at the opening. A total of $225,000 was paid by the Mercur in dividends, and the company equipped three hoisting works, increased the capacity of its mill and purchased an adjoining group of rich ground in addition. It is estimated that the company has ore blocked out for five years ahead of its milling capacity, and in consequence the outlook for this stock is extremely bright. Great attention was paid to it by outside investors, all of whom were well pleased with their purchases. A doubling of the mill capacity is now contemplated by the board of directors. The Mercur company is managed on a strictly business basis and its officers have the confidence of the stockholders.

Northern Light was one of the new stocks to come upon the board and it made a good record, advancing about 30% within the past two months. The company is equipping its properties with a cyanide plant, which is to be utilized to work the veritable mountain of ore covered by the company's claims. The stock sold as low as 35c., but closed between the 60c. and 70c. mark.

With the month of January the Ontario resumed dividends, paying 10c. per share and distributing a total of $180,000 for the year. The stock sold up as high as $14, but on the reaction went down to $9 and closed at $10. Ontario produced ore and bullion steadily during the year and near the close made some important developments which opened up a great stretch of new and rich territory. The drain tunnel is doing all the work predicted for it.

Through the suspension of operations at the company's properties, Rover suffered a decided decline, and instead of selling at $1.25 as at the opening, it closed at 45c., but with the tendency upward. Developments in the neighborhood of the Rover group have proven some of the company's ground. Operations are to be resumed in the near future.

During 1896 Silver King paid in dividends the total sum of $412 500, missing one month through litigation involving its water supply. The stock gained $3 in value and is phenomenal for the light offerings. The company pays regularly 25c. per share monthly, and its ore reserves indicate that it can continue this record for years to come.

Incorporated with a capital stock of $5,000,000, upon which it immediately commenced dividend payments of $5,000 monthly, or ½c. per share, the Sacramento stock came on the market in the last month of the year. Having no treasury stock, it is taken for granted that the company's principal stockholders are marketing some of their holdings. The Sacramento properties are near those of the Mercur and the company operates a 50-ton cyanide plant.

Sunshine proved a disappointment to its friends, although the majority of its stockholders are still warm in the faith. The company owns a group of mines in the Mercur district, but has not as yet been able to save all of the values in its ores with its cyanide plant. A number of improvements are to be made at once, and these are expected to remedy all defects. Although able to pay expenses with the proceeds of its cyanide sales, the company was not able to pay the expected dividends, and as a result the stock slumped materially, closing in the neighborhood of $1, as compared with $3.50 at the opening.

A good record was made by the Swansea, a new stock, and one of the new dividend-payers. Although a silver-lead proposition, the ore is found in such quantities that the company is enabled to pay dividends of 5c. per share. The stock came on the market under 20c., and by September 1st, when dividends were commenced, had advanced to $2.50, where it is still hanging. A total of $20,000 was paid by the company.

South Swansea is a direct neighbor of the Swansea, both being in the Tintic district, and the same conditions surround it as at the Swansea. The company commenced dividend payments with the close of the year, and its stock has reached $1.60, with the tendency upward. The South Swansea is capitalized more heavily than is the Swansea, its number of shares being 150,000, but it pays 5c. per share monthly.

On the assessment of 1c. per share, Tetro has pressed development work continuously, and now has a very gratifying showing, although it has never yet uncovered pay ore. Operations are being continued, however, and recent developments in the near neighborhood would indicate that it is simply the question of a short time now when the company will begin to reap the harvest. It is still a speculation, however.

Utah paid regular dividends of 2 cents per share up to November, when it ceased in order that improvements might be made at the properties with the money which had always gone to the stockholders. The company is shipping high-grade ore continuously, and with its new hoisting plant it should make a still better record. Its dividends for the year aggregated $20,000. The stock closed higher than it opened, although having sold at considerably higher figures than those now governing.

One dividend of 2c. per share was paid by the Utah Consolidated of Tintic, aggregating the sum of $2,000. The low price of the metals curtailed shipping, however, and as a result the stockholders reaped little benefits from their holdings. With an improvement in metal prices the Utah Consolidated could make a splendid record.

Although only a prospect at the commencement of the year, the Mercur Gold Dust has developed into good property under the energetic management of the company organized for the development of the group. The properties of the company are located in the Mercur district, and early in the spring they will be equipped with a cyanide plant of large capacity, and the Gold Dust should soon be a dividend-payer. An immense amount of good grade ore has been blocked out ready for extraction. The treasury stock of the company was placed at 50c. per share, and no sales have taken place under that figure.

THE SAN FRANCISCO STOCK MARKET IN 1896.

BY OUR SPECIAL CORRESPONDENT.

Gloom has again settled down over the Mining Stock Exchange in this city and the year 1896, during which at one time things looked so propitious, closes with a darker outlook than ever noted before. The number of dealers operating on the market has been decreasing rapidly of late and most of the old-time leaders have left in disgust, the margin of profits being too small to suit their ideas in comparison with the risk. The main objection on their part is that they have no one of their own caliber to play against.

It will be remembered, however, that the situation was very much the same at the close of 1895, with prices even lower than to-day. It looked then as though the end had come, yet within a very few weeks the street was ablaze with excitement over a strike of ore on the Brunswick ground, newly acquired by the companies. The reported failure of this same development is what has now plunged the market and all connected with it into the depths of despair. The street is antagonistic to the Brunswick management, and it controls now, in the absence of leading manipulators, with means sufficient to thwart the bearish disposition of "chippers" content to play the game on a 5c. profit one way or the other.

The majority of the heavier class of operators have lost considerable money during the year on the operations, meeting a Waterloo at last in the late bear raid on Brunswick shares. These people have been backing Chollar to win out as a bonanza on development at depth, but so far, true hopes and belief have not been realized, although the prospects all along have been most favorable and alluring. The ore encountered last spring, which sent prices booming in all directions, was first cut on the south drift from the Norcross-Chollar shaft a few feet south of the Chollar line pitching toward Potosi. On opening up the 300-ft. level, the same ore was found in a crosscut run east from the south drift, 54 ft. from the foot wall which was tapped at this point. The ore is of fine milling character and high grade, with a large percentage of gold. Another ledge was cut on this level about three feet from the foot wall, of an entirely different character of ore of lower grade and very irregular. At the same time some streaks of ore were cut north of the Chollar line in Norcross territory, but they pinched out, conveying the impression that the mineralization of the ground was bunchy, a prediction emanating from the earliest stages of development operations from the bear faction.

The hopes of the management were centered upon the 400-ft. level, to which the inclined shaft had been sunk in the meantime. Should they get the ledge there cut upon the 200 and 300 levels above, they would have enough ore in sight to sustain their belief in a large existing deposit of ore at that point. The price of the stock was well maintained up to this period, Chollar selling on one spurt up as high as $4.30, with a corresponding advance on a smaller scale in all of the other Brunswick shares. The south drift was run out after considerable delays and finally crosscutting began north and south of the Chollar line. The Norcross people ran out east about 12 ft. north of the line on the ground for a distance of 90 ft. without finding the hanging wall, cutting a streak of high-grade ore which gave out and then stopped discouraged. To the south in Chollar west, crosscuts were put into the foot wall without finding the streak cut there on the 300 level, and so far two east crosscuts run toward the hanging wall have failed to find the ledge cut above on the 200 and 300 levels, although in the most southerly a small streak was found supposed to be the same as that cut over the line in Norcross, 21 ft. in from the lateral drift.

This unsatisfactory result of exploration gave rise to the cry of failure and Chollar dropped below the dollar mark again, carrying the whole line with it. The Norcross Company drew out of the struggle and not only stopped work on the Brunswick, but also in the old mine on the Comstock, pending the final issue of the celebrated litigation, which seems as far off as ever. The Chollar management will thus be forced to carry on the work from this time forward with Potosi. So long as the funds hold out the management will feel sanguine that they will eventually find the ore continuation they are looking for further south and east than they were warranted in supposing from the apparent dip of the ledge where it was cut above. The trouble is that the street does not share their enthusiasm, which will make the exploitation of their plans more difficult.

The north end mines operating on the Brunswick have not been a whit more successful. With the exception of a little ore cut early in the year in a surface tunnel on the Gould & Curry location, nothing has yet been found of value, although much has been expected from this portion of the lode owing to some rich finds in surface workings many years ago. Best & Belcher is the favorite gamble at this end, and large quantities of the stock are still held by people who hope that a strike on the Bruns-

wick will enable the company to show at least one bar of bullion in return for the expenditure of many thousands of dollars before the company fades out of existence. Occidental, the main Brunswick location, has received another black eye during the year owing to repeated failures to justify the hopes of investors, and the stock is again quoted at bedrock figures after working up at one time to $2.50. The ore, when found, defies all methods of reduction hitherto adopted, being of most unfortunately rebellious disposition.

All eyes are again turned for relief to the Comstock, and here, it must be said, the prospects are anything but bright. Still with the history of past revivals before them, dealers cheer themselves with the theory borne out by previous events that on Pine street the darkest hour precedes the dawn. At the north end, Ophir and Con-Cal-Virginia are looked upon as the possible factors in the near future for another upheaval in prices. At present, it must be confessed, the suggestion seems a little far-fetched, but while there is life there is hope, goes on this particular section of the lode and plenty of money can always be found at short notice to back the slightest indication of improvement in the north end mines. It will be fortunate if something does turn up in this quarter. In other directions the prospects are gloomy to say the least. Work on a very limited scale is now being carried on in the middle and south end properties. Savage, Chollar and Crown Point, when the mines are open, produce a little bullion, not enough, however, to bar the necessity for levying assessments. Even Con-Cal-Virginia has been running behind hand for months past until forced to make another call on its shareholders, owing to a marked falling-off in the yield and grade of the ore.

of these companies for the time being, and the camp has faded out of memory with speculators on the street. A few California gold mines in a position to pay dividends were added in their place during the year, but they failed to attract local investors, who find properties of this class too slow and tame a route on the road to a fortune.

THE LONDON MINING STOCK MARKET FOR 1896.

BY OUR SPECIAL CORRESPONDENT.

The mining stock market in London during 1896 has been characterized by one long continued slump. The great boom of 1895 expended itself in the late autumn of that year, and ever since then the markets have become duller and duller, and quotations have fallen lower and lower, until at the present time of writing business is nearly at a standstill, with no prospect of any revival. These remarks apply in a most marked degree to South Africans. Of West Australians the same may be said, though it ought to be added that during the earlier months of the year they enjoyed a temporary boom. Other main features of the market have been the attempt, only partially successful, to boom New Zealand gold mines, the advance of Indian gold shares in popularity, the turning of the attention of London promoters to British Columbia as a profitable field for their enterprise, and the introduction of several large mining properties from the United States and Mexico by millionaire promoters.

The South African market during 1896 has been influenced more by politics than by mining developments. The great anxiety at the beginning of the year and the continued uncertainty as to the treatment of foreigners in the Transvaal have quite prevented any new enterprise in that State, and the loss of its grip on its territories by the Chartered Com-

FLUCTUATIONS OF MINING STOCKS AT SAN FRANCISCO DURING 1896.

Name and Location of Company.	Par Value.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
		H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.
Alpha, Nev.	$100	.29	.18	.18	.10	.14	.08	.15	.05	.37	.10	.25	.12	.17	.09	.12	.03	.20	.07	.18	.10	.15	.08	.12	.06
Alta Nev.	100	.14	.06	.15	.06	.19	.12	.16	.07	.25	.06	.28	.07	.12	.06	.14	.07	.15	.04	.15	.04	.12	.06	.08	.03
Andes, Nev.	100	.30	.17	.18	.10	.36	.25	.33	.24	.55	.26	.58	.27	.36	.26	.35	.26	.35	.24	.31	.23	.25	.17	.20	.10
Belcher, Nev.	100	.38	.25	.28	.20	.34	.18	.47	.20	1.10	.45	.90	.41	.57	.32	.41	.23	.59	.39	.67	.49	.49	.29	.40	.27
Benton Cons., Nev.	100	.....	.....	.....	.....	.....	.....	.25	.15	30	.10	.30	.15	.25	.15	.25	.10	.20	.15	.15	.....	.15	.12	.15	.08
B. & Belcher, Nev.	100	1.05	.81	.85	.68	.72	.50	.65	.39	2.10	.50	1.70	.76	.94	.50	1.20	.60	1.15	.79	1.20	.83	.94	.79	.76	.49
Bodie, Cal.	100	.47	.38	.40	.30	.35	.16	.50	.22	1.10	.48	.72	.37	.68	.35	.70	.43	.75	.50	.65	.50	.65	.50	.58	.50
Bonanza, Nev.	100	.....	.....	.....	.....	.....	.....	.....	.....	.25	.17	.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bullion, Nev.	100	.22	.16	.17	.10	.13	.06	.15	.02	.41	.13	.45	.15	.24	.15	.21	.06	.21	.08	.23	.16	.18	.12	.17	.02
Bulwer, Cal.	100	.....	.....	.....	.....	.....	.....	.43	.19	.51	.27	.45	.25	.45	.25	.44	.25	.50	.37	.48	.37	.46	.39	.43	.36
Caledonia, Nev.	100	.11	.08	.09	.06	.10	.06	.08	.02	.20	.04	.20	.10	.16	.10	.15	.10	.16	.09	.16	.10	.12	.08	.12	.07
Challenge, Nev.	100	.87	.55	.66	.47	.51	.42	.40	.21	.81	.35	.56	.30	.58	.30	.60	.40	.70	.39	.60	.45	.39	.26	.36	.24
Chollar, Nev.	100	.....	.....	.....	.....	.....	.....	.68	.33	3.10	.55	4.30	2.15	3.25	1.75	2.80	1.80	2.50	1.90	2.35	1.85	2.25	1.65	1.90	.68
Confidence, Nev.	100	1.25	1.00	1.10	.85	1.05	.78	.90	.65	1.70	.90	1.35	.90	1.50	.73	1.80	1.20	1.50	1.20	1.10	.88	1.15	.78	.92	.60
Cons. Cal. & Va., Nev.	100	2.70	2.35	2.40	1.75	1.80	1.55	1.90	1.55	3.50	1.65	3.20	1.80	2.15	1.55	2.00	1.60	2.00	1.55	2.60	1.60	1.85	1.65	1.60	1.00
Cons. Imp., Nev.	100	.03	.02	.02	.....	.02	.01	.02	.01	.02	.....	.04	.02	.03	.01	.03	.01	.03	.01	.03	.02	.02	.01	.02	.01
Cons. New York, Nev.	100	.06	.....	.06	.....	.04	.03	.05	.03	.15	.03	.10	.04	.05	.03	.05	.04	.05	.04	.04	.....	.04	.02	.04	.03
Crown Point, Nev.	100	.34	.19	.40	.18	.66	.29	.42	.25	.96	.31	.79	.42	.55	.34	.40	.24	.53	.28	.57	.47	.42	.28	.29	.15
East Sierra Nevada, Nev.	100	.....	.....	.....	.....	.....	.....	.05	.04	.06	.02	.06	.03	.05	.04	.05	.04	.05	.02	.04	.....	.04	.....	.04	.....
Eureka Cons., Nev.	100	.....	.....	.....	.....	.....	.....	.25	.....	.25	.22	.25	.....	.25	.....	.25	.10	.40	.25	.30	.25	.30	.25	.25	.....
Eureka Cons. Drift, Cal.	1	.....	.....	.....	.....	.....	.....	.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Exchequer, Nev.	100	.10	.06	.07	.03	.06	.03	.05	.03	.20	.03	.15	.03	.07	.04	.06	.02	.06	.03	.05	.03	.05	.02	.02	.01
Gould & Curry, Nev.	100	.59	.47	.46	.31	.35	.26	.44	.18	2.00	.41	1.75	.85	1.20	.61	.76	.45	.65	.40	.91	.43	.71	.54	.55	.27
Hale & Norcross, Nev.	100	1.45	1.05	1.45	1.10	1.45	1.05	1.40	1.05	3.10	1.10	3.40	2.00	1.50	1.05	1.50	1.05	1.60	1.30	1.55	1.25	1.35	1.05	1.10	.84
Jackson, Nev.	100	.....	.....	.....	.....	.....	.....	.50	.40	.40	.....	.40	.....	.50	.25	.50	.25	.50	.25	.40	.25	.40	.25	.40	.25
Julia, Nev.	100	.03	.....	.07	.06	.....	.....	.07	.04	.26	.08	.20	.04	.13	.08	.10	.06	.10	.04	.08	.04	.06	.04	.06	.05
Justice, Nev.	100	.05	.02	.12	.02	.11	.10	.10	.02	.25	.03	.13	.04	.07	.03	.07	.04	.08	.04	.08	.04	.10	.01	.08	.04
Kentuck, Nev.	100	.08	.04	.07	.03	.07	.05	.06	.02	.11	.03	.08	.02	.09	.01	.09	.04	.09	.05	.08	.05	.05	.02	.07	.01
Lady Washington, Nev.	100	.02	.01	.06	.01	.05	.04	.05	.....	.06	.04	.06	.03	.06	.04	.05	.02	.04	.02	.04	.02	.04	.02	.03	.02
Mayflower Gravel, Cal.	20	.....	.....	.....	.....	.....	.....	.....	.....	1.05	1.00	.....	.....	1.50	.....	1.25	.99	.80	.75	.80	.....	.80	.....	.....	.....
Mexican, Nev.	100	.72	.57	.62	.50	.57	.49	.38	.25	1.40	.31	1.35	.66	.70	.50	.64	.46	.66	.45	.53	.45	.65	.49	.54	.35
Mono, Cal.	100	.....	.....	.....	.....	.....	.....	.16	.10	.20	.05	.11	.04	.20	.04	.23	.15	.30	.15	.20	.15	.16	.15	.20	.15
Nevada Queen, Nev.	100	.....	.....	.....	.....	.....	.....	.05	.....	.05	.....	.06	.04	.04	.03	.05	.03	.04	.03	.04	.03	.04	.03	.04	.....
North Gould&Curry, Nev.	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.09	.....	.08	.03	.10	.07	.....	.....	.09	.05	.....	.....	.....	.....
Occidental, Nev.	100	1.20	.02	1.20	.81	1.05	.76	1.50	.84	2.35	1.10	1.80	.78	1.20	.55	.75	.50	.65	.32	.54	.29	.39	.20	.21	.19
Ophir, Nev.	100	1.65	1.30	1.35	1.20	1.25	1.15	1.30	.83	2.90	1.15	2.40	1.15	1.35	.95	1.15	.89	1.15	.83	1.45	.84	1.35	1.15	1.20	.84
Overman, Nev.	100	.26	.16	.18	.13	.19	.12	.14	.08	.30	.09	.47	.13	.25	.16	.23	.12	.20	.11	.19	.12	.12	.06	.07	.04
Pioneer, Cal.	10	.....	.....	.....	.....	.....	.....	.....	.....	1.50	1.00	1.50	1.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Potosi, Nev.	100	.70	.50	.55	.39	.45	.36	.42	.20	1.90	.26	2.00	.90	1.55	.90	1.35	.80	1.10	.68	.85	.60	1.05	.67	.88	.45
Savage, Nev.	100	.39	.26	.52	.32	.50	.31	.37	.23	1.65	.28	2.10	.89	.92	.61	.80	.47	.69	.45	.79	.41	.66	.51	.54	.31
Scorpion, Nev.	100	.04	.02	.03	....	.05	.02	.05	.02	.11	.02	.15	.05	.08	.05	.07	.05	.10	.06	.10	.06	.08	.01	.04	.03
Seg. Belcher & Mides, Nev	100	.13	.08	.09	.06	.11	.04	.17	.03	.31	.14	.26	.11	.16	.10	.13	.06	.18	.06	.11	.05	.15	.03	.13	.09
Sierra Nev., Nev.	100	.70	.41	.43	.33	.75	.30	.67	.54	1.60	.59	1.30	.55	.92	.50	.67	.39	.83	.40	.74	.63	.69	.51	.51	.35
Silver Hill, Nev.	100	.03	.02	.02	.....	.02	.01	.02	.01	.08	.01	.08	.02	.02	.01	.03	.01	.03	.01	.03	.01	.03	.01	.02	.01
Silver King, Ariz.	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.50	.15	.63	.15	.35	.15	.35	.30
Syndicate, Cal.	100	.....	.....	.....	.....	.....	.....	.03	.01	.05	.02	.05	.02	.06	.02	.04	.02	.05	.02	.03	.02	.03	.02	.03	.02
Union Cons., Nev.	100	.54	.35	.55	.33	.78	.43	.66	.45	1.35	.50	1.30	.52	.62	.40	.50	.32	.57	.33	.64	.51	.58	.45	.46	.31
Utah, Nev.	100	.15	.04	.14	.08	.11	.07	.10	.03	.30	.04	.21	.07	.15	.07	.11	.06	.10	.04	.16	.06	.13	.06	.08	.04
Yellow Jacket, Nev.	100	.59	.41	.45	.32	.53	.30	.42	.29	.90	.34	.85	.40	.52	.32	.42	.26	.42	.26	.60	.27	.50	.38	.36	.24

Unless some unexpected change takes place soon, the year of 1897 will see the end of the speculative mining market in San Francisco. The business is virtually on its last legs now. The mines will then pass into the hands of inside syndicates to be worked on more business-like principles for low grade ores, large reserves of which are available in all the leading properties. Worked on the system usually adopted by private individuals, there is no reason why these mines should not be running to-day on a highly remunerative business with expenses of operation cut down to the level of other mining companies. Wages are still kept up to the standard of $4 per day at Virginia City, which has handicapped the companies to a great extent, the Miners' Union taking the stand that extravagant salaries in the managerial department justify equally high rates for the working force. The stockholders are the only sufferers by this division of opinion.

A combination of all the active Bodie mines has been effected during the year. Bulwer, Bodie and Mono have been absorbed by the Standard Consolidated Company, which in the future will represent the entire interests of the group. This is, of course, a subject for congratulation upon the part of the shareholders in the three companies which have now linked their fortunes with that of a prosperous concern which has managed to keep its head well above water for the past 20 years. The combination cuts off a great many sinecure positions in this city, the incumbents of which have fattened a salary list always well maintained by a never-failing assessment system. Standard Consolidated shares are now listed on the local stock exchange for the first time in the history of the company.

The Tuscarora mines have, with one or two exceptions, been weeded from the list of the Exchange. The decline in silver has ended the mission

pany has made prospecting and development impossible in Rhodesia. The closing down of some Transvaal mines, such as Langlaagte Royal, and the rumors of further moves of like character, rumors which are not entirely groundless, have caused some nervousness as to the future of gold mining in the Rand. The poor returns from such deep level properties as have commenced operations and the increased cost of mining under such conditions have not helped to brighten the outlook. But perhaps the most potent factor of the slump has been the inability of English and continental investors to absorb more stock. A limit to such capacity always exists and when it was reached in this case in October of last year, promoters, jobbers and speculators alike became embarrassed by their holdings, failures occurred and prices became depressed by forced sales. This course of things has been going on for quite a year and the end is not yet. Some promoters had the hardihood to commence new business, but all have proved failures and some have been wound up. Of the latter the most conspicuous has been the Barnato Bank. In general terms it may be said that the quotations of South African stocks are now only one-half or one-third of what they were at the highest point last year, as far as speculative and promoting companies are concerned, such as Chartered, Consolidated Gold Fields, Rand mines, the Barnato group, etc. The fall in gold producers is not so marked, but the prices are still far higher than their real values.

The output of gold in the Rand during the first eleven months of 1896 amounted to 2,075,357 oz., and the production for the year may be estimated at 2,280,357 oz., as compared with 2,277,635 oz. in 1895 and 26,024,164 oz. in 1894. The political troubles caused considerable interruption during the early months of the year and the output was reduced quite 25% for four months. On the outbreak of the troubles, the native laborers fled and

many mines were unable to supply sufficient ore to keep the mills going.

In the early months of the year the West Australian market had a temporary revival, owing chiefly to the brokers and jobbers leaving the South African market on the receipt of the bad news from the Transvaal. For a time the whole of the mining speculation was centered round the West Australian section, and prices were pushed up. New companies were brought out by the dozens, to provide work for the new influx of jobbers, but it is doubtful whether any great amount of selling actually occurred. The boom soon died away, because it had nothing substantial to sustain it. The failure of many companies to find the mines they were supposed to have obtained, and the inability to work on anything but rich ore, caused notable collapses. Then the lack of transport facilities, and the absence of official reports relating to the output discouraged intending investors, so that at the present time the market is in a very weak condition. Backers of the market point to the richness of the ore and the large production at some of the mines, but as the ore may be picked, the results do not show the average yield of the ore won. No mine has as yet shown such good results as Bayley's Reward in its palmy days, but Great Boulder and Hannan's Brownhill promise to become great mines. Dividends from companies working mines are as yet extremely scarce, and the only companies that do pay dividends in the West Australian market are the promoting companies, and the majority of such dividends are in shares and not cash.

During the summer there was a small boom in New Zealand gold mines and many new companies were organized. The public were, however, glutted with South Africans, which were slumpery, and West Australians, which did not prove good speculations, so that the boom never reached large proportions. As far as it went, there was more genuine buying and more real gold mines brought before the public than in the West Australian boom. Perhaps the great distance of New Zealand from England was also a cause of the comparative failure of the boom.

The Indian mining market has been, as usual, a restricted one, but during the days of general dullness, some speculators commenced to handle the shares and to point out the regularity of the output of the established mines and the chances of success of some new flotations. The shares in Mysores and Champion Reefs were soon rushed up from £3 to £8. Though the market manipulations have passed away, the shares retain their price and their good reputation.

PRICES OF MINING STOCKS AT LONDON DURING 1896.

Company.	Location.	Product.	Par Value.	Opening.	Highest.	Lowest	Closing
North Americans:			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Alaska-Mexican	Alaska	Gold.	1 0 0	1 10 0	2 0 0	1 0 0	1 7 6
Alaska-Treadwell	Alaska	Gold.	5 0 0	5 5 0	5 15 0	4 15 0	4 15 0
De Lamar	Idaho	Gold & silver.	1 0 0	18 0	1 1 6	11 0	11 0
Hall Mines	Brit. Col	Cop. & silver.	1 0 0	2 15 0	3 5 0	1 3 9	1 7 6
Montana	Montana	Gold & silver.	1 0 0	7 3	11 0	2 6	3 9
Palmarejo	Mexico	Gold & silver.	1 0 0	1 0	3 6	6	1 0
Pinos Altos	Mexico	Gold & silver.	1 0 0	2 6	5 0	1 3	1 3
Plumas-Eureka	California	Gold.	2 0 0	12 6	16 3	2 6	2 6
Richmond	Nevada	G'ld, sil., lead	5 0 0	12 6	1 10 0	5 0	12 6
Sierra Buttes	California	Gold.	2 0 0	8 9	11 3	2 6	2 6
Springdale	Colorado	Gold.		4 0	1 3	1 9	3	3
South Americans:								
Colomb. Hydraulic	Colombia	Gold.	1 0 0	8 9	12 6	6 3	6 3
Frontino & Bolivia	Colombia	Gold.	1 0 0	1 1 3	1 12 6	17 6	1 7 6
St. John del Rey	Brazil	Gold.	1 0 0	18 9	1 3 6	15 0	12 6
Copper:							
Anaconda	Montana	Cop. & silver.	5 0 0	6 0 0	7 15 0	5 12 6	5 15 0
Cape Copper	So. Africa	Copper	2 0 0	1 17 6	2 17 6	1 17 6	2 10 0
Copiapo	Chile	Copper	2 0 0	1 15 0	3 0 0	1 13 9	1 13 9
Mason & Barry	Portugal	Cop. & sulp.	4 0 0	2 10 0	3 10 0	2 7 6	3 2 6
Rio Tinto	Spain	Copper	10 0 0	14 12 6	25 6 3	14 12 6	24 8 9
Tharsis	Spain	Cop. & sulp.	2 0 0	4 10 0	6 2 6	4 5 0	5 17 6
Australians:							
Bayley's Reward	W. Australia	Gold.	1 0 0	4 6	7 6	1 6	1 6
Broken Hill Prop'r	N. So. Wales	Silver	1 0 0	2 11 3	3 2 6	2 1 3	2 10 0
Mount Morgan	Queensland	Gold.	1 0 0	2 17 6	4 0 0	2 16 3	3 3 9
South Africans:							
British S. Africa	So. Africa	Lands & expl.	1 0 0	3 5 0	5 11 3	2 1 3	2 1 3
City & Suburban	Transvaal	Gold.	4 0 0	4 0 0	5 10 0	3 2 6	3 2 6
Crown Reef	Transvaal	Gold.	1 0 0	9 10 0	12 7 6	9 0 0	9 0 0
De Beers Con	Cape Col'y	Diamonds	5 0 0	20 17 6	31 11 3	20 0 0	28 7 6
Ferreira	Transvaal	Gold	1 0 0	14 10 0	22 0 0	14 0 0	18 0 0
Geldenhuis Estate	Transvaal	Gold.	1 0 0	3 7 6	4 15 0	2 10 0	2 10 0
Henry Nourse	Witwaters'd	Gold.	1 0 0	5 17 6	7 15 0	4 10 0	5 17 6
Heriots (New)	Witwaters'd	Gold.	1 0 0	9 7 6	10 2 6	7 0 0	7 0 0
Jagersfontein	Orange F. S.	Diamonds	5 0 0	8 10 0	12 10 0	7 10 0	10 2 6
Langlaagte Estate	Transvaal	Gold.	1 0 0	4 15 0	6 11 3	3 17 6	3 17 6
Primrose (New)	Transvaal	Gold.	1 0 0	5 0 0	6 15 0	3 15 0	3 15 0
Robinson	Transvaal	Gold.	5 0 0	8 12 6	10 7 6	7 15 0	7 15 0
Sheba	Transvaal	Gold.	1 0 0	1 12 6	2 6 3	1 5 0	1 18 9
Simmer & Jack (New)	Transvaal	Gold.	5 0 0	4 10 0	7 5 0	3 17 6	3 17 6
Wemmer	Witwaters'd	Gold.	1 0 0	10 0 0	11 12 6	6 5 0	6 5 0

The copper market has been firm and rising through the whole year, and the shares of copper mining companies have risen in accordance. Rio Tinto, Cape Copper, Copatapo and others have all risen considerably, the first named standing a figure just double of that ruling this time last year. The scaling down of the debenture interest has placed Rio Tinto in a much better financial position. During the past month another new financial arrangement has been introduced, viz., the splitting of each £10 share into two of £5 each, one to bear fixed preference interest and the other to be ordinary. In this way the shares are made available both for investment and speculation, so that their popularity is sure to be increased. The purchase of half the Anaconda and stock, and its introduction on the London and Paris markets has been an important feature of the year, but so far it has not formed a very strong market for itself. The floating of the Mountain Copper mines in Shasta County, California, by the Mathesons is the latest matter of interest in the copper market.

Of metallurgical matters of public interest, the most important during the past year has been the judgment in the Transvaal declaring the MacArthur-Forrest cyanide patents invalid. The release of the Rand companies from this bondage will have a favorable effect on gold-mining there; but, so far, very little use of it has been made on the London market. No new process for treating gold ores of any other than minor importance has been introduced during the year. Among new processes for the treatment of zinc-lead sulphides the most promising appears to be that of the Burnham syndicate. This process is in operation at Swansea, and very large quantities of ore are being treated, but so far no results have been published. The Ashcroft process has been sold to a limited company with large capital and under influential support. It is doubtful, however, whether the process, as described, will ever be a practical success.

The American mining market has during the past year been confined between narrow limits, but there are signs of a revival on different lines from what we have hitherto been accustomed to. The companies which were formed 5 to 10 years ago have very nearly disappeared and their mines worked out; and their promoters have transferred their attention to districts which are more fashionable now-a-days. On the other hand, several new mines have been introduced during the past year, but they are all large mines that have arrived at the dividend paying period and possessing immense reserves. Such mines have been bought for large sums in cash and sold on the market for still larger sums, but obviously it is only promoters of the most wealthy sort that can carry out such business. Among American mines of this character which have been introduced here are the Anaconda, the Minas Prietas (renamed Grand Central), and the Mountain Mines, Shasta County, Cal. Quite a number of other such mines are in treaty for and within the next six months; their presence in the London market will exercise an important influence. Cripple Creek has been a failure in London. No influential promoters handled any of the mines, and it was left to others to attempt to introduce comparatively worthless properties. It is doubtful if any of the flotations were a success.

All during the year there has been an expectation of a boom in British Columbian mines, but owing chiefly to promoters and jobbers being filled up with other stock the boom has not yet arrived. In the summer months several promoting companies and a number of companies to work river gravel and placers in Cariboo were brought before the notice of the public, but they met with a cool reception. No companies have yet been floated to work the mines of Kootenay, though most promoters have acquired options on properties there and are only waiting for a little encouragement to bring them forward.

Other districts in Canada that are receiving attention are the Lake of the Woods and Rat Portage gold mining districts. Several companies have been floated to work mines there and some have been taken up privately. It is said that some very influential promoters have interested themselves there.

The companies which used to form the backbone of the American mining market have mostly got into low water. Richmond Consolidated has transferred its attention to West Australia. Jay Hawk has abandoned its Montana property and acquired an interest in New Zealand. Poorman, after being reconstructed last year under new management, has again come to the end of its money and has been again reconstructed. The hope for the future is very small. The repeated warnings of the *Engineering and Mining Journal* concerning this property have been fully confirmed and justified by the facts brought out during the past few years. Of Springdale nothing is now heard except demands by its shareholders for an investigation into its management. Golden Leaf has gone to West Australia and shipped its machinery thither. Golden Feather and Golden Gate have at last parted with the services of Colonel McLaughlin, but their position does not seem to be much improved. Palmarejo is still at law with the Mexican Mineral Railway, and its production is practically at a standstill. The Montana Company has not maintained its advance of last year, as the new strike has not proved a permanent body of ore. Twin Lake Placers pays now a much smaller dividend than formerly, as its gravels yield a very small return. New Guston works without profit.

Of miscellaneous new American companies introduced to the British public during the year, the only one of any importance was the Prize Gold Mines, which formed part of the Hearst estate, and was promoted here by Irwin Stump. Another was the Gold Fields, of Mexico, formed to take over the Hurnapa properties from the Palmarejo Company. Finally, the stock of Playa de Oro (Ecuador) was introduced here and a considerable amount sold.

The state of the Cornish tin industry has continued to cause much alarm among those who are interested in its welfare. Strong exertions have been made to rouse the owners of the land and mines, and also the miners to the fact that their methods of mining are obsolete, and that the cost-book system prevents the subscription of further capital. The management of Dolcoath, under the new limited company, has proved suc-

PRICES OF MINING STOCKS AT PARIS DURING 1896.

Name of Company.	Country.	Product.	Par Value	Opening.	Highest	Lowest	Closing
			Fr.	Fr.	Fr.	Fr.	Fr.
Acieries de Creusot	France	Steel mfrs.	2,000	1,650.00	2,000 00	1,650.00	1,915.00
Acieries de Firminy	France	Steel mfrs.	500	1,500.00	1,723.00	1,430.00	1,700.00
Acieries de Fives Lille	France	Steel mfrs.	500	640.00	800.00	640.00	794.00
Acieries de la Marine	France	Steel mfrs.	500	821.25	1,025.00	821.25	1,025.00
Acieries de Longwy	France	Steel mfrs.	500	600.00	890.00	600.00	890.00
Anzin	France	Coal		4,175.00	4,720.00	4,175.00	4,500.00
Boleo	Lower Cal	Copper	500	1,170.00	1,575.00	1,160.00	1,380.00
Briansk	Russia	Coal & iron	500	1,390.00	1,400.00	1,290.00	1,375.00
Bruay	France	Coal	400	18,800.00	23,900.00	18,800.00	23,500.00
Callao	Venezuela	Gold	125	10.50	10.50	4.00	4.00
Champ d'Or	South Africa	Gold	25	65.00	65.00	31.00	33.00
Courrieres	France	Coal	300	4,200.00	4,665.00	4,200.00	4,589.00
De Beers Cons	South Africa	Diamonds	125	635.00	790.00	555.00	735.00
Dombrowa	Russia	Coal	500	535.00	640.00	534.00	540.00
Dynamite Centrale	France	Explosives	500	485.00	550.00	448.00	500.00
Fraser River	Brit. Columb.	Gold	25	31.00	53.00	30.00	32.00
Huanchaca	Bolivia	Silver	125	75.00	90.00	61.25	85.50
Huta-Bankowa	Russia	Iron & steel	500	2,640.00	2,930.00	2,625.00	2,923.75
Laurium	Greece	Zinc & lead	500	587.50	670.00	555.00	670.00
Malfidano	Italy	Zinc	500	799.00	1,070.00	730.00	1,018.00
Metaux. Cie. Fran. de	France	Metal d'lers	500	355.00	557.50	355.00	546.00
Mokta-el-Hadid	Algeria	Iron	500	705.00	780.00	690.50	756.00
Nickel	N. Caledonia	Nickel	500	187.00	200.00	135.00	169.00
Penarroya	Spain	Coal, etc	500	1,100.00	1,640.00	1,100.00	1,640.00
Rebecca	Colorado, U. S	Gold	25	27.00	34.50	7.50	7.50
Rio Tinto	Spain	Copper	250	390.00	655.00	372.50	627.50
Saint Elie	Fr. Guiana	Gold	25	23.00	23.00	18.25	18.50
Salines de l'Est	France	Salt	500	260.00	350.00	260.00	295.00
Sels Gem. de la Rus. Mer	Russia	Salt, etc	500	690.00	699.00	605.00	620.00
Tharsis	Spain	Copper	50	117.00	155.00	113.00	154.50
Vielle Montagne	Belgium	Zinc	80	431.25	660.00	425.00	505.00

cessful, and already several other mines have followed its example. But the regeneration has not yet been sufficiently widespread to work much improvement in Cornish mining.

DIVIDENDS AND ASSESSMENTS.

We give below tables showing the dividends paid and assessments levied by American mining companies for a series of years ending with 1896. The tables are as complete as they can be made, but they are necessarily imperfect, because many companies do not make reports, and the facts cannot be ascertained. There are many mines also which are carried on by private partnerships, and if the profits of these could be given the amount of profits shown would be very largely increased. With regard to assessments, a few States require the publication of notices, but in others no such regulation exists. In many cases companies have willingly aided us and have given all necessary information;if all would do this our work would be very much lightened.

DIVIDENDS PAID BY AMERICAN MINES. ($1 = $1000; total, full amount.)

Company.	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	Totals.
Adams, S., L., Colo.	15	....	....	....	75	8	....	....	6	....	$640.500
Ætna Cons., Q., Cal.	....	....	....	....	....	....	....	20	20	40	80,000
Alaska-Mexican, G., Alaska	....	....	....	....	....	....	....	26	80	70	173,031
Alaska-Treadwell, G., Alaska (*a*)	....	....	....	....	450	300	375	375	400	850	3,025,060
Alice, S., G., Mont.	....	25	25	95	75	....	....	....	....	....	975,000
Alma, G., Idaho	....	....	15	....	....	....	....	....	....	....	60,000
Alturas, G., Idaho	....	113	....	....	....	....	....	....	....	....	262,250
Amador Gold, Ltd., G., Cal.	....	....	....	31	....	....	....	....	....	....	31,250
American & Nettie, G., Colo.	....	....	150	....	45	30	....	....	....	....	225,000
American Belle, S., C., Colo.	....	....	....	....	50	....	....	....	....	....	50,000
American Coal, Md.	....	....	....	....	90	90	90	90	....	....	360,000
American Dev. & Mg., G., S., C., Mont.	....	....	....	....	....	....	....	52	24	....	76,422
American Turquoise, N. M.	....	....	....	....	....	....	60	....	....	....	60,000
Amethyst, Colo.	....	....	....	....	....	....	....	....	36	....	36,000
Amy & Silversmith, Mont.	43	....	....	....	....	....	....	....	....	....	247,530
Anaconda, G., Colo.	....	....	....	....	....	18	....	....	....	....	12,500
Anaconda Copper, Mont.	....	....	....	....	....	....	....	....	....	2250	2,250,000
Anchoria-Leland, Colo.	....	....	....	....	....	....	....	....	....	30	30,000
Argentum-Juniata, S., Colo.	....	....	....	....	....	....	....	....	39	....	39,000
Argyle, G., Colo.	....	....	....	....	....	20	....	....	....	....	20,000
Aspen, S., L., Colo.	....	80	280	200	100	100	100	40	....	....	900,000
Atlantic, C., Mich.	40	120	80	100	40	....	....	....	....	....	700,000
Aurora, L., Mich.	150	....	....	....	200	100	200	....	....	50	700,000
Badger, S., Can.	....	....	....	38	....	....	....	....	....	....	37,500
Bald Butte, G., Mont.	....	....	....	20	30	30	100	200	128	....	437,500
Ballarat Smuggler, G., Colo.	....	....	....	....	6	....	....	....	....	....	6,000
Bangkok-Cora Belle, S., Colo.	....	....	3	42	....	....	....	....	54	6	107,510
Bannister, S., Mont.	....	....	....	24	72	6	....	....	....	....	102,000
Bassick, S., G., Colo.	....	....	....	....	....	....	....	....	....	....	400,000
Bates-Hunter, G., Colo.	....	....	....	....	....	68	....	....	....	....	67,500
Belden, F. E., M., N. H.	....	....	....	....	....	....	45	60	60	4	213,000
Bellevue, S., L., Idaho	38	....	....	....	....	13	....	....	....	....	200,000
Best Friend, S., Colo.	....	....	....	....	....	70	20	....	....	....	90,000
Big Bend, G., Cal.	48	....	....	....	....	....	....	....	....	....	258,000
Big Six, G., S., Colo.	....	....	....	....	....	....	....	....	....	2	2,500
Bimetallic, S., G., Mont.	....	....	....	200	840	200	190	....	....	....	1,630,000
Bodie Cons., G., Cal.	....	....	....	....	....	....	....	75	....	....	1,677,572
Bonanza King, S., Cal.	....	....	....	....	....	....	....	....	....	....	185,000
Boreel, S., Colo.	....	....	....	....	....	....	60	23	....	....	105,000
Boston & Montana, C., S., Mont.	....	400	500	625	500	....	....	275	1050	1500	4,925,000
Brooklyn Lead, L., S., Utah	25	....	....	....	....	....	....	....	....	....	127,000
Brotherton, I., Mich.	....	....	....	....	....	40	80	....	....	....	120,000
Bull-Domingo, L., S., Colo.	....	....	....	20	29	4	....	....	....	....	53,000
Bullion, Beck & Champion, Utah	....	....	....	....	....	....	....	425	325	265	1,922,000
Bulwer Cons., G., Cal.	....	....	....	....	....	15	....	....	....	....	190,000
Bunker Hill & Sullivan, S., L., Idaho	....	20	....	....	....	....	....	....	....	....	150,000
Buxton, So. Dak.	5	....	....	....	....	20	....	....	....	....	25,000
Caledonia, G., Dak.	....	16	80	56	....	56	....	....	....	....	192,000
California, G., Colo.	....	....	....	20	....	....	....	....	....	....	116,500
Calliope, S., Colo.	....	....	50	85	5	....	....	....	....	....	140,000
Calumet & Hecla, C., Mich.	1000	2000	2000	2000	2000	2000	2000	1500	3000	2500	48,850,000
Carbonate Hill, S., L., Colo.	....	....	....	....	....	....	....	....	....	....	80,000
Cariboo, B. C.	....	....	....	....	....	....	....	....	49	76	125,410
Carlisle, G., N. M. (*b*)	....	175	....	....	....	....	....	....	....	....	175,000
Catalpa, S., L., Colo.	....	....	....	....	....	....	....	....	....	....	270,000
Centennial-Eureka, S., G., L., Utah	....	....	....	150	330	90	188	195	510	390	1,860,000
Central, C., Mich.	40	70	40	30	20	....	....	....	....	....	1,970,000
Champion, G., Cal.	....	....	....	27	43	41	41	41	27	....	219,000
Charleston, P., S. C.	....	....	....	....	....	....	140	....	....	....	140,000
Chrysolite, S., L., Colo.	....	....	....	....	....	....	....	....	....	....	1,650,000
Church, G., Cal.	....	....	....	....	....	....	....	....	5	....	5,000
Clay County, G., Colo.	....	....	....	8	48	....	....	....	....	....	56,000
Cleopatra, G., S., So. Dak.	....	....	....	....	....	....	450	....	....	....	450,000
C. O. D., G., Colo.	....	....	....	....	....	....	....	....	20	5	25,000
Cœur d'Alène Silver-Lead Mg. Co., S., L., Idaho	....	....	70	160	80	72	30	....	....	....	340,000
Colorado Central, S., Colo.	83	83	75	....	14	55	28	....	....	....	502,661
Colorado Fuel Coal, L., Colo.	....	....	178	189	252	67	67	....	....	....	732,700
Commonwealth, S., Nev.	....	....	....	20	....	....	....	....	....	....	20,000
Confidence, S., Nev.	....	175	25	....	....	....	....	....	....	....	277,680
Cons. Cal. & Va., S. G., Nev. (*c*)	1118	1118	756	162	216	....	....	108	108	....	3,898,800
Cons. New York, S., G., Nev.	....	....	....	....	....	....	10	....	....	....	10,000
Consolidation Coal, Md.	....	....	....	....	....	205	....	....	....	....	205,000
Centention, S., Ariz.	....	....	....	....	....	50	....	....	....	....	2,637,500
Cook's Peak, S., L., Colo.	....	....	....	....	55	60	....	....	....	....	119,532
Copper Bell, S., Mont.	....	....	....	14	....	....	....	....	....	....	13,500
Copper Queen, C., S., Ariz.	....	140	70	210	....	140	300	200	150	....	1,910,000
Coptis, S., Nev. (*d*)	....	....	....	....	....	....	....	....	1	....	77,000
Coronas, S., G., Mex.	....	....	....	....	....	....	....	....	....	5	5,000
Cortez, S., Nev.	....	....	....	173	250	95	45	....	....	....	735,000
Cosmopolitan, S., Utah	....	....	....	....	....	....	....	....	....	....	75,000
Crescent, S., L., Utah	18	....	....	....	....	....	....	....	....	....	238,000
Dalton & Lark, G., S., L., Utah	....	....	....	....	....	....	....	....	....	88	87,500
Daly, S., L., Utah	375	488	450	450	450	450	188	....	....	37	2,887,500
Deadwood-Terra, G., So. Dak. (*e*)	100	....	....	....	50	100	....	....	....	100	1,240,000
Deer Creek, S., G., Idaho	....	10	10	....	....	....	....	....	....	....	20,000
De Lamar, S., G., Idaho	....	....	....	....	150	200	450	500	450	500	2,250,000
Della, S., Colo.	....	....	....	....	....	....	....	50	....	....	50,000
Derbec, G., Cal.	20	....	30	30	20	....	....	....	....	....	280,000
Dexter, S., Nev.	....	....	....	....	....	....	100	....	....	....	100,000
Dunkin, S., L., Colo.	30	100	40	....	....	....	....	....	....	....	390,000
Dunstone, G., S., L., Mont.	....	6	....	....	....	....	....	....	....	....	6,000
Eclipse, L., S., Colo.	20	....	....	....	....	....	....	....	....	....	20,000
Elkhorn, S., L., Mont.	30	....	....	125	300	303	225	142	50	....	1,349,689
Elkton Cons., G., Colo.	....	....	....	....	....	....	....	60	....	90	166,960
Empire, G., Mont. (*f*)	71	....	....	....	....	....	....	....	....	....	70,500
Enterprise, S., G., Colo. (*m*)	....	....	....	....	....	250	450	125	....	....	825,000
Eureka Cons., S., L., Nev.	50	88	....	38	50	13	....	....	....	....	5,112,500
Evening Star, S., L., Colo.	....	13	25	....	....	....	....	....	....	....	1,437,500
Father de Smet, G., So. Dak.	....	....	....	....	....	....	....	....	....	....	1,125,000
Florence, S., Mont.	....	....	....	....	....	....	....	....	35	54	89,348
Forepaugh, Colo.	....	....	....	....	....	....	....	....	16	....	16,000
Franklin, C., Mich.	40	160	80	80	80	160	120	80	....	....	1,240,000
Freeland, S., Colo.	....	....	....	....	....	....	....	....	....	....	190,000
Galena, S., L., G., Utah	....	....	....	....	....	....	....	....	6	49	61,000
Garfield, S., G., Nev.	13	25	....	....	....	....	....	....	....	....	85,000

DIVIDENDS PAID BY AMERICAN MINES—*Continued.*

Company.	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	Totals.
Garfield Grouse, G., Colo.	....	....	....	....	....	....	....	....	....	12	12,000
Glengarry, S., G., Mont.	....	....	....	....	10	....	....	....	....	....	10,000
Golconda, S., G., Idaho	....	120	....	....	....	....	....	....	....	....	120,000
Gold Coin, G., Colo.	....	....	....	....	....	....	....	....	15	85	100,000
Golden Eagle, G., Colo.	....	....	....	....	....	....	....	....	....	10	10,000
Golden Fleece, Colo.	....	....	....	....	....	....	....	....	192	162	563,179
Golden Reward, G., So. Dak.	....	20	....	....	....	60	60	....	....	....	125,000
Gold & Globe, G., Colo.	....	....	....	....	....	....	....	....	11	19	30,750
Gold Rock, G., Colo.	....	....	....	....	29	....	....	....	....	....	28,750
Granby, Z., Mo.	....	....	20	....	....	....	....	....	....	....	20,000
Granite, S., L., Idaho	....	8	20	....	....	....	....	....	....	....	83,400
Granite Mountain, S., G., Mont.	2000	1600	2400	2400	1400	520	....	....	....	....	12,120,000
Great Western, Q., Cal.	....	....	....	....	25	137	25	....	....	....	388,366
Hale & Norcross, S., G., Nev.	....	224	....	....	....	....	....	....	....	....	1,822,000
Harquahala, Ariz.	....	....	....	....	....	....	....	72	....	....	126,000
Hecla Cons., S., L., Mont.	30	100	180	123	180	90	60	120	90	30	2,130,000
Helena & Frisco, L., S., Idaho	....	....	....	79	190	20	....	15	10	50	475,000
Helena M. & R. Co., Mont.	....	....	....	....	....	....	....	....	....	....	197,970
Helena & Victor, S., Mont.	....	....	....	....	20	....	....	....	....	....	70,000
Highland, G., So. Dak.	....	....	....	....	....	....	....	....	50	140	3,224,918
Holmes, S., Nev.	....	....	....	....	....	25	....	....	....	....	75,000
Homestake, G., So. Dak.	300	300	188	150	150	150	150	256	344	375	6,087,500
Honorine, S., Utah	38	....	....	....	....	....	....	....	....	....	125,000
Hope, S., Mont.	25	50	....	....	....	100	175	75	10	50	642,252
Horn Silver, S., L., Utah	....	....	50	200	200	200	230	150	50	50	5,130,000
Hubert, G., Colo.	....	18	5	....	....	....	....	....	....	....	247,000
Idaho, G., Cal.	140	357	178	29	93	42	105	....	....	....	5,489,000
Ideal, S., L., Colo.	....	....	....	....	....	....	....	....	....	....	15,000
Illinois, S., N. M.	25	....	20	20	....	....	....	....	....	....	65,000
Iowa, G., S., L., Colo.	....	....	....	....	....	....	....	....	....	50	60,000
Iron Hill, So. Dak.	44	....	....	....	....	....	....	....	....	....	156,250
Iron Mountain, S., Mont.	....	....	....	50	25	....	30	50	105	35	445,000
Iron Silver, S., L., Colo.	300	300	100	....	....	....	....	....	....	....	2,500,000
Isabella, G., Colo.	....	....	....	....	....	....	....	....	23	180	202,500
Ivanhoe, Colo.	....	....	10	....	....	....	....	....	....	....	10,000
Jackson, G., S., Nev.	....	....	5	....	5	....	....	....	2	....	80,000
Jay Gould, G., S., Mont.	95	226	74	22	....	....	....	....	....	....	459,000
Jay Hawk, S., G., Mont. (*g*)	....	....	....	....	....	33	....	....	....	....	33,375
Jumbo, G., Colo.	33	....	....	....	....	....	....	....	....	....	33,000
Kearsarge, C., Mich.	....	....	....	80	....	....	....	....	40	....	120,000
Kennedy, G., Cal.	....	....	....	....	360	500	480	540	184	....	1,796,000
Kentuck, S., G., Nev.	....	....	....	....	....	....	....	....	....	....	1,350,000
Lady Franklin, N. M.	100	....	....	....	....	....	....	....	....	....	100,000
Lake Superior, I., Mich.	....	....	....	....	....	400	....	....	84	....	484,000
Last Chance, G., B. C.	....	....	....	....	....	....	....	....	....	20	20,000
Last Chance, S., Colo.	....	....	....	....	....	650	....	....	....	....	650,000
Leadville, S., L., Colo.	20	....	....	....	....	12	12	....	....	....	316,000
Le Roi, G., B. C.	....	....	....	....	....	....	....	....	25	225	250,000
Lexington, G., Colo.	....	....	....	....	....	36	....	....	....	....	36,000
Lexington, S., Mont. (*h*)	....	....	64	....	....	....	....	....	....	....	609,000
Little Chief, S., L., Colo.	....	....	....	20	....	....	....	....	....	....	820,000
Little Rule, S., Colo.	....	....	....	100	120	....	....	....	....	....	220,000
Maid of Erin, S., L., C., Colo. (*i*)	....	....	....	....	....	....	....	....	60	....	740,000
Mammoth, Utah	20	50	130	470	320	....	....	....	....	60	1,150,000
Manhattan, S., Nev.	....	....	....	....	....	....	....	....	....	....	437,500
Martin White, S., Nev.	....	....	....	....	....	....	....	....	....	....	140,000
Mary Murphy, S., Colo.	70	....	....	....	....	....	....	....	....	....	175,000
Maxfield, S., L., Utah.	....	....	....	....	36	18	....	....	....	....	117,000
Mayflower Gravel, G., Cal.	....	....	....	....	....	....	....	....	....	....	166,897
May-Mazeppa, S., L., Colo.	....	....	....	70	110	....	....	....	....	....	180,000
Mercur, G., Utah	....	....	....	....	....	....	....	50	150	175	200	575,000
Metropolitan, I., Mich.	....	....	....	....	....	....	....	....	....	....	3,912,500
Minas Prietas, S., Mex.	....	....	....	50	....	....	....	....	....	....	50,000
Minnesota, I., Minn.	....	....	....	....	840	840	495	....	....	495	3,240,000
Mollie Gibson, S., Colo.	....	....	....	....	1000	1700	1230	100	50	....	4,080,000
Monitor, So. Dak.	....	....	38	7	....	....	....	....	....	....	45,000
Mono, G., Cal.	....	....	....	....	....	....	....	....	....	....	12,500
Montana Limited, G., S., Mont.	719	413	206	178	83	....	....	....	205	....	2,890,000
Montana Ore Purchasing, Mont.	....	....	....	....	....	....	....	....	160	320	480,000
Moon Anchor, G., Colo.	....	....	....	....	....	....	....	....	....	24	24,000
Moose, Colo.	....	....	....	....	....	....	....	....	108	72	6	186,000
Morning Star, S., L., Colo.	75	....	....	....	50	....	....	....	....	....	925,000
Morning Star Drift, G., Cal.	....	....	....	....	23	83	72	106	154	....	435,000
Moulton, S., Mont.	60	....	....	....	....	30	....	20	30	....	460,000
Mount Diablo, S., Nev.	....	40	40	20	30	....	30	....	....	....	225,000
Mount McClellan, S., Colo.	....	....	....	....	13	....	....	....	....	....	12,500
Mount Pleasant, Cal.	45	....	....	....	....	....	....	....	....	....	180,000
Mount Rosa, Colo.	....	....	....	....	....	....	....	....	5	5	20	30,000
Napa, Q., Cal.	....	....	30	40	40	70	70	50	80	70	810,000
Navajo, S., G., Nev.	....	....	40	....	....	....	....	....	....	....	226,111
New Elkhorn, Colo.	....	....	....	....	....	....	....	....	....	72	72,000
New Guston, S., Colo.	....	100	188	170	440	124	....	....	....	....	1,210,000
New Hoover Hill, G., N. C.	....	....	....	....	....	....	....	....	....	....	37,200
Newton, Cal.	....	....	....	....	10	....	....	....	....	....	10,000
North Banner Cons., G., Cal.	....	....	....	....	20	....	....	....	....	....	20,000
North Belle Isle, S., G., Nev.	....	200	....	....	....	....	....	....	....	....	230,000
North Commonwealth, S., G., Nev.	....	....	....	....	25	....	....	....	....	....	25,000
North Star, G., Cal.	....	150	100	....	50	50	100	....	....	....	450,000
Nugget, G., Colo.	....	....	....	....	....	....	....	....	5	5	10,000
Omaha, G., Cal.	....	....	....	13	....	7	43	43	....	....	106,100
Ontario, S., Utah	900	900	900	1650	900	750	....	....	....	180	13,355,000
Original, S., C., Mont.	12	6	3	....	....	....	....	....	....	....	138,000
Oro, G., S., L., Colo.	....	....	....	95	....	....	....	....	....	....	95,000
Oro Grande, G., Cal	....	....	....	....	....	....	....	....	....	....	188,860
Osceola, C., Mich.	100	150	50	225	150	150	100	....	100	125	2,072,500
Pacific Coast Borax, B., Cal.	....	....	....	....	180	180	63	....	....	....	422,500
Pamlico, Nev.	....	21	12	....	....	12	....	....	....	....	189,080
Pandora, Mont.	....	....	....	....	3	3	....	....	....	....	6,000
Paradise Valley, S., Nev.	10	....	....	....	....	....	....	....	....	....	160,000
Parrott, C., S., Mont.	54	144	144	252	360	216	138	67	....	....	1,569,000
Peacock, N. M.	....	....	....	....	....	....	....	....	....	....	50,000
Petro, S., Utah	....	....	....	....	18	....	....	....	....	....	17,500
Pharmacist, G., Colo.	....	....	....	....	....	36	44	....	....	....	80,000
Pittsburg, G., Nev.	....	30	....	....	....	....	....	....	....	....	29,850
Pleasant Valley, C., Utah	....	....	....	....	....	....	20	....	....	....	593,056
Plumas Eureka, G., Cal.	18	70	123	....	70	25	53	....	....	....	2,696,294
Plutus, S., Colo.	....	....	....	....	....	....	....	....	....	....	20,000
Plymouth Cons., G., Cal.	375	80	....	....	....	....	....	....	....	....	2,280,000
Poorman, G., Colo.	....	25	15	85	....	....	....	....	....	....	125,000
Poorman, S., Idaho (*l*)	....	....	....	....	....	57	....	....	....	....	56,935
Portland Gold, G., Colo.	....	....	....	....	....	....	....	67	556	240	863,000
Quicksilver, Q., Cal. (*j*)	129	283	193	257	118	....	....	....	....	....	2,475,082
Quincy, C., Mich.	800	360	280	320	400	350	300	400	600	1000	8,670,000
Red Cloud, S., L., Idaho	....	....	....	20	80	70	10	....	....	....	180,000
Reed & National, S., G., Colo.	....	....	....	45	....	....	....	....	....	....	45,000
Rescue, N. M.	....	....	....	....	....	12	....	....	....	....	12,000
Retriever, So. Dak.	....	....	....	....	13	....	....	....	....	....	12,500
Rialto, G., Colo.	....	....	....	....	32	18	....	....	....	....	50,250
Richmond Cons., S., L., Nev.	68	....	....	....	34	....	14	....	....	....	4,386,780
Rico-Aspen, Colo.	....	....	....	....	....	....	50	300	....	....	350,000
Robinson, S., Colo.	....	....	....	....	....	....	....	....	....	....	585,000
Rocky Fork Coal, Mont.	....	....	....	....	100	100	....	....	....	....	200,000
Rooks, G., Vt.	....	....	....	....	....	....	....	....	....	....	61,000
Running Lode, Colo.	....	....	....	5	15	6	1	....	....	....	27,000
Russell, G., Cal.	30	....	....	....	....	....	....	....	....	....	30,000
Sacramento, G., S., L., Utah	....	....	....	....	....	....	....	....	....	5	5,000
Saint Joseph, L., Mo.	90	....	....	....	150	150	150	150	150	....	2,524,000
Security, G., Colo.	....	....	....	....	....	....	....	....	....	....	56,000
Sheridan, S., G., Colo.	....	....	....	....	75	....	....	....	....	....	300,000

DIVIDENDS PAID BY AMERICAN MINES—*Continued.*

Company.	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	Totals.
Sherwood, Z., Mo.	3	....	....	....	....	....	....	....	....	....	3,000
Sierra Bella, S., N. M.	....	....	....	....	....	....	....	....	....	....	30,000
Sierra Buttes, G., Cal.	76	15	....	....	25	36	31	....	....	....	1,584,933
Sierra Nevada, Idaho	....	20	20	....	....	....	....	....	....	....	40,000
Silent Friend, S., L., Colo.	....	....	....	....	60	....	....	....	....	....	60,000
Silver Cord, S., L., G., Colo.	....	....	45	....	....	....	....	....	....	....	265,000
Silver King, S., Ariz.	175	....	....	....	....	....	....	....	....	....	1,950,000
Silver King, Utah	....	....	....	....	....	....	....	....	263	375	825,000
Silver Mining of Lake Valley, N. M.	....	25	25	180	80	....	....	....	....	....	300,137
Silverton, S., Colo.	....	....	....	....	....	....	....	....	....	....	80,000
Slocan Star, B. C.	....	....	....	....	....	....	....	....	50	200	250,000
Small Hopes, S., Colo.	600	....	25	25	....	38	25	....	....	25	3,275,000
Smuggler Union, G., S., Colo. (m)	....	....	....	....	....	....	....	....	....	100	100,000
Standard, G., Cal.	20	50	....	....	10	40	20	40	20	....	3,717,868
Swansea, G., S., L., Colo.	....	....	....	....	....	....	....	2	....	....	39,000
Swansea, Utah	....	....	....	....	....	....	....	....	1	20	21,500
Syndicate, Cal.	....	....	....	....	....	....	....	....	....	....	72,000
Tamarack, C., Mich.	....	640	560	670	600	600	600	400	400	300	4,770,000
Teal & Poe, S., L., N. M.	....	....	....	....	9	....	....	....	....	....	9,000
Temonj, G., Colo.	....	....	....	....	....	....	....	....	10	....	10,000
Tomboy, G., Colo.	....	....	....	....	....	....	....	....	300	....	300,000
Trinity River, Colo.	....	....	....	....	....	....	15	....	....	....	15,000
Union, Colo.	....	....	....	....	....	....	....	27	18	23	73,000
United Verde, C., S., Ariz.	....	....	....	30	....	30	435	....	....	....	562,500
Utah, Utah	....	....	....	....	....	15	5	....	17	22	175,000
Utah Cons., Nev.	....	....	....	....	....	....	....	....	....	3	3,000
Valencia, M., N. M.	....	....	....	....	....	....	....	....	....	....	41,250
Victor, G., Colo.	....	....	....	....	....	....	120	105	240	240	705,000
Victor L. & M., Colo.	....	....	....	....	....	....	....	....	24	12	42,000
Viola Limited, S., L., Idaho	38	94	....	....	....	....	....	....	....	....	337,500
Ward Cons., S., Colo.	....	....	20	....	....	....	....	....	....	....	20,000
War Eagle, B. C.	....	....	....	....	....	....	....	....	133	55	187,500
Webb City, Z., Mo.	....	....	4	....	....	....	....	....	....	....	4,400
Whale, Colo.	....	....	....	....	5	....	....	....	....	....	5,000
Woodside, S., Utah	....	....	25	....	....	....	....	....	....	....	25,000
W. Y. O. D., G., Cal.	....	....	....	6	36	24	36	24	....	....	108,000
Yankee Girl, S., Colo. (k)	187	....	....	125	260	....	....	....	....	....	1,665,000
Yosemite, S., Utah.	....	....	....	....	....	5	....	....	....	....	5,000
Young America, G., Cal.	....	10	....	....	....	....	....	....	....	....	175,000

(*G*) Gold; (*S*) Silver; (*L*) Lead; (*I*) Iron; (*C*) Copper; (*Q*) Quicksilver; (*B*) Borax; (*Z*) Zinc; (*M*) Mica.

(*a*) Formerly the Alaska Mining and Milling Company, reorganized in 1891 as the Alaska-Treadwell Gold Mining Company; the dividends credited for 1891 and 1892 are the payments of the latter company. The Alaska Mining and Milling Company paid $700,000 previously.

(*b*) Reconstructed into the Golden Leaf, Limited, of Montana.

(*c*) Previous to the consolidation in August, 1884, the California had paid $31,320,000 in dividends and the Consolidated Virginia $42,390,000.

(*d*) Formerly the Young America South Mining Company, reorganized as the Coptis in 1891.

(*e*) Previous to consolidation, the Deadwood paid $275,000 and the Terra $75,000.

(*f*) Reconstructed as the Golden Leaf, Limited.

(*g*) Jay Hawk & Lone Pine Consolidated Mining Company, Limited.

(*h*) Société Anonyme des Mines de Lexington.

(*i*) Maid of Erin Silver Mines, Limited, formerly Henriette & Maid Consolidated Mining Company. The dividends for 1887, 1888, 1889, and 1890 were paid by the old company, and those for 1891 and 1892 by the new company.

(*j*) Including dividends paid on preferred stock and common stock.

(*k*) Yankee Girl Silver Mines, Limited, formerly Yankee Girl Mining Company. The above statement includes the payments by both the old and new companies.

(*l*) Enterprise Mining Company, of Rico, Colo.; there is also an Enterprise Mining Company in Aspen and one in Leadville.

(*m*) Poorman Mines, Limited, operating the Poorman Mine at Silver City, Idaho, which paid large dividends in 1865 and 1866.

(*n*) Previous to consolidation in 1896 the Smuggler Mining Company had paid $1,140,000 in dividends.

ASSESSMENTS LEVIED BY MINING COMPANIES.

Name and Location of Company.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	Total to Jan. 1, 1897.
Ada Cons., Utah	....	....	....	....	$330	....	$3,000	....	$3,330
Alliance, Utah	$30,000	....	$40,000	....	....	....	50,000	....	200,000
Allouez, Mich.	40,000	$40,000	40,000	....	....	$16,000	....	....	1,440,937
Alpha, Nev.	26,500	42,250	15,000	$36,750	10,000	6,000	15,750	$15,750	257,500
Alta, Nev.	....	54,000	30,000	27,000	25,200	50,400	20,160	32,400	3,579,760
Anchor, Utah	15,000	....	150,000	....	90,000	....	....	....	560,000
Andes, Nev.	25,000	25,000	30,000	25,000	....	25,000	15,000	15,000	260,000
Argenta, Nev.	10,000	....	....	....	....	....	....	....	335,000
Baltimore, Nev.	50,000	20,000	....	....	....	....	....	....	145,000
Belcher, Nev.	104,000	104,000	104,000	78,000	....	50,200	50,200	52,000	3,312,420
Belle Isle, Nev.	....	15,000	....	30,000	20,000	....	....	10,000	240,271
Bellevue-Idaho, Idaho	12,500	16,037	....	....	....	....	....	....	104,787
Benton Cons., Nev.	....	....	....	....	....	....	....	....	556,000
Best & Belcher, Nev.	75,200	149,485	100,800	50,000	75,600	50,400	50,400	25,200	2,606,425
Bodie Cons., Cal.	75,000	50,000	....	....	40,000	....	....	15,000	745,000
Bodie Tunnel, Cal.	....	25,000	25,000	25,000	....	....	....	....	202,906
Bogan, Utah	....	....	....	....	....	....	....	....	....
Brunswick Cons., Cal.	....	....	20,000	20,000	....	8,000	16,000	12,000	78,000
Buckeye, Utah	....	....	....	....	....	....	....	3,750	3,750
Bullion, Nev.	....	25,000	50,000	100,000	25,000	30,000	40,000	20,000	3,030,000
Bulwer Cons., Cal.	50,000	....	15,000	....	10,000	10,000	5,000	5,000	175,000
Bunker Hill, So. Dak.	....	....	....	....	....	....	3,750	625	4,375
Burlington, Cal.	....	....	....	....	....	....	....	3,000	3,000
Butte & Boston, Mont.	....	....	....	....	....	....	1,500	1,500	3,000
Butte Queen, Cal.	....	....	....	4,000	....	....	....	....	6,000
Caledonia Silver, Nev.	....	....	150,000	....	....	50,000	....	5,000	3,240,000
California, Cal.	....	....	....	6,000	....	....	4,500	....	16,500
Camp Floyd, Utah	....	....	....	....	....	....	....	....	....
Centennial-Eureka, Utah	30,000	....	....	....	....	....	....	....	30,000
Central North Star, Cal.	....	....	....	....	10,000	....	....	....	10,000
Challenge Cons., Nev.	25,000	50,000	50,000	45,200	15,000	50,000	5,000	7,500	300,000
Channel Bend, Cal.	....	....	....	....	....	....	....	....	....
Chollar, Nev.	112,000	....	168,000	112,000	61,600	56,000	56,000	28,000	2,021,600
Christmas, Utah	....	....	....	....	....	....	....	....	....
Cœur d'Alène, Idaho	....	....	....	....	....	....	....	....	25,000
Commonwealth, Nev	....	....	....	30,000	....	....	....	....	190,000
Comstock, Nev.	....	....	....	....	....	....	....	....	30,000
Comstock, Utah	....	....	....	....	....	....	....	25,000	25,000
Concord, N. C.	....	....	....	....	....	....	....	....	6,000
Concordia, Nev.	....	....	....	....	....	....	....	....	75,000
Confidence, Nev.	....	18,720	18,720	49,920	....	6,240	14,976	7,488	1,636,974
Cons. Cal. & Va., Nev.	....	....	....	108,000	6,220	108,000	54,000	118,800	4,960,130
Cons. Imperial, Nev.	25,000	75,000	150,000	26,500	....	....	5,000	500	2,082,000
Cons. New York, Nev.	25,000	45,000	30,000	20,000	25,000	5,000	10,000	5,000	165,000
Cons. Pacific, Nev.	15,000	6,000	....	....	....	....	....	....	198,000
Courier, Idaho	....	....	....	....	....	....	....	....	10,000
Crocker, Ariz.	20,000	25,000	20,000	5,000	5,000	....	....	....	180,000
Crown Point, Nev.	100,000	....	150,000	100,000	80,000	65,000	25,000	70,000	2,965,000
Dalton, Utah	....	....	....	....	3,750	5,000	5,000	5,000	43,750
Del Monte, Nev.	20,000	20,000	29,050	20,000	....	....	....	....	120,000
Derbec Blue Gravel, Cal.	....	....	....	10,000	5,000	....	....	....	15,000
Dexter, Nev.	....	8,000	....	....	....	....	....	....	8,000
Diana, Nev.	....	....	....	8,000	....	....	....	....	83,000
Dutch Canyon, Utah	....	....	....	....	....	....	....	....	....

ASSESSMENTS LEVIED BY MINING COMPANIES—*Continued.*

Name and Location of Company.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	Total to Jan. 1, 1897.
East Best & Belcher, Nev	....	25,000	45,000	20,000	....	20,000	....	....	110,000
East Sierra Nevada, Nev	10,000	....	10,000	....	....	5,000	....	....	25,000
Emerald, Utah	....	....	....	....	....	....	....	....	....
Eureka Cons., Nev.	50,000	....	....	....	....	....	....	12,500	562,500
Eureka Cons., Utah	....	....	....	....	....	....	....	5,000	5,000
Exchequer, Nev.	25,000	50,000	25,000	45,000	15,000	10,000	5,000	5,000	720,000
Felice, Ariz.	....	....	....	....	....	....	....	....	20,000
Fisher, Ariz.	....	....	....	....	....	....	....	....	20,000
Flowery, Nev.	....	....	....	....	....	....	....	....	130,000
Found Treasure, Nev.	12,500	45,000	....	50,000	....	....	....	....	131,500
Gold Belt, Utah	....	....	....	....	1,345	....	....	1,667	3,012
Gold Flat, Cal.	....	....	....	11,000	2,000	....	....	....	13,000
Gold Queen, Utah	....	....	....	....	....	....	....	....	....
Goodyear, Mont.	....	....	....	2,000	4,183	....	....	....	17,183
Gould & Curry, Nev.	91,800	60,400	64,800	76,400	80,200	32,400	48,600	48,600	4,850,400
Grand Prize, Nev.	120,000	25,000	....	....	....	....	....	....	785,000
Hale & Norcross, Nev.	....	56,000	168,000	168,000	56,000	56,000	39,200	61,600	6,820,400
Hartery Cons., Cal.	....	5,000	5,000	....	....	2,000	2,000	2,000	33,000
Hartshorn, So. Dak.	....	6,250	....	....	....	....	....	....	6,250
Hayward Group, So. Dak	....	2,000	....	....	....	....	....	....	2,000
Head Cent. & Tranq., Nev	....	....	....	....	....	....	.....	....	22,824
Heath, Idaho	....	....	....	....	....	....	....	....	25,000
Hector, Cal.	45,000	....	....	....	....	....	....	....	45,000
Hidden Treasure, Cal.	....	....	....	....	1,000	....	....	....	1,000
Himalaya, Utah	....	....	1,800	1,800	....	....	....	....	10,000
Holmes, Nev.	....	25,000	....	....	....	....	....	....	345,000
Honorine, Utah	12,500	....	12,500	....	....	....	....	....	50,000
Hudson Bay, Cal.	....	....	....	....	10,000	....	....	....	10,000
Huron, Mich.	....	....	....	....	....	....	....	....	280,000
Independence, Nev	....	....	....	5,000	....	....	....	....	345,000
Iron Hill, So. Dak.	15,000	20,625	15,000	....	....	....	....	....	169,375
Jack Rabbit, Cal.	....	....	....	15,000	13,000	5,000	....	....	118,000
Jackson, Nev.	....	....	....	....	10,000	....	....	....	247,500
John Duncan, Mich.	2,000	....	....	....	....	....	....	....	4,000
Julia Cons., Nev.	....	....	11,000	....	5,000	....	5,500	5,500	1,490,000
Justice, Nev.	....	....	26,250	42,000	30,000	75,000	20,000	15,750	3,665,750
Kearsarge, Mich.	....	....	....	....	....	....	....	....	190,000
Kentuck Cons., Nev.	....	....	36,750	31,500	10,500	26,250	10,500	5,250	119,500
Keystone, Nev.	....	....	....	....	....	....	....	....	240,000
Keyes, Nev.	30,000	....	....	....	....	....	....	....	125,000
Kingman Silver, Ariz.	....	....	5,000	....	....	....	....	....	5,000
King of the West, Idaho	....	....	....	....	....	....	....	....	45,000
Kossuth	....	....	....	....	....	....	....	....	433,000
Lady Washington, Nev.	....	....	21,400	....	....	....	....	5,400	157,800
La Plata, Nev.	3,000	....	....	....	....	....	....	....	3,000
Leo, Mont.	....	....	....	....	....	....	....	10,000	52,500
Little Pittsburg, Utah	....	....	....	....	....	....	....	4,000	6,000	10,000
Locomotive, Ariz.	10,000	5,000	....	....	....	....	....	....	....	115,000
Lone Star Cons., Cal.	....	....	....	5,000	....	....	....	....	....	12,500
Lucky Bill, Utah	....	....	....	....	....	....	....	....	7,200	48,000
Manhattan, Nev.	....	....	....	....	....	....	....	....	....	250,000
Martin White, Nev.	25,000	50,000	50,000	50,000	25,000	25,000	....	....	....	1,350,000
Mayflower, Cal.	55,000	....	....	....	....	....	....	....	....	470,000
Mexican, Nev.	50,400	25,200	50,400	75,600	75,600	75,600	75,600	40,320	3,084,080
Michigan Gold, Mich.	....	....	....	10,000	....	....	....	....	....	40,000
Mikado, Mich.	....	....	....	....	....	....	....	....	....	15,200
Milwaukee, Mont.	....	....	2,500	....	....	....	....	....	....	12,500
Missoula Placers, Mont.	....	....	....	....	....	....	....	....	....	4,000
Modoc Chief, Idaho	....	....	....	5,000	....	....	....	....	....	975,000
Mollie Gibson, Colo.	....	....	....	10,000	....	....	....	....	....	20,000
Montreal, Utah	....	....	....	750	....	....	....	375	....	4,875
Mono, Cal.	62,500	12,500	12,500	....	....	....	....	5,000	10,000	807,500
Mount Diablo, Nev.	....	....	....	....	....	....	....	....	7,500	145,000
Mount Terry, So. Dak.	....	750	....	....	....	....	....	....	....	750
Navajo, Nev.	10,000	15,000	15,251	20,000	20,000	....	....	....	....	555,521
Nevada Queen, Nev.	70,000	....	15,000	25,000	25,000	....	....	5,000	....	270,000
North Banner, Cal.	....	....	....	....	....	....	....	....	10,000	21,794
North Belle Isle, Nev.	100,000	20,000	50,000	20,000	38,075	....	....	....	10,000	523,075
North Bonanza, Nev.	10,090	....	....	....	....	....	....	....	....	246,000
No. Commonwealth, Nev	80,000	25,000	25,000	....	10,000	....	....	....	....	120,000
North Comstock, Nev.	....	....	....	....	....	....	....	....	....	10,000
North Eureka, Utah	....	....	....	....	....	....	....	....	1,500	1,500
North Extension, Nev.	....	....	....	....	....	....	....	....	....	25,000
No. Gould & Curry, Nev.	20,000	....	30,000	10,000	10,000	20,000	....	10,000	....	320,000
North Occidental, Nev.	....	6,000	....	....	....	....	....	....	....	13,000
North Peer, Ariz.	5,000	5,000	....	....	....	....	....	....	....	21,000
Occidental Cons., Nev.	50,000	75,000	25,000	50,000	55,000	30,000	30,000	65,000	....	453,652
Ophir, Nev.	50,000	50,000	50,000	50,000	100,000	100,000	100,000	25,200	4,635,840
Original Keystone, Nev.	....	....	....	10,000	....	....	....	....	....	250,000
Osceola Cons., Cal.	....	....	....	....	....	....	....	....	1,000	3,000
Overman, Nev.	57,600	28,800	79,340	126,720	60,000	34,560	23,040	34,560	4,211,600
Paradise Valley, Nev.	....	....	....	....	....	....	....	....	....	57,000
Paxman, Utah	....	....	....	....	....	....	....	....	....	....
Pennsylvania Cons., Cal.	....	....	2,750	....	....	....	....	....	....	36,050
Peer, Nev.	20,000	10,000	15,000	20,000	10,000	5,000	....	....	....	215,000
Peerless, Nev.	90,000	25,000	10,000	5,000	5,000	5,000	....	....	....	410,000
Phil Sheridan, Nev.	35,000	....	....	....	....	....	....	....	....	65,000
Pine Hill, Cal.	....	....	....	....	3,000	3,000	5,000	5,000	....	20,000
Potosi, Nev.	10,000	55,400	112,000	56,000	84,000	112,000	56,000	28,000	2,021,600
Queen Bee, So. Dak.	....	3,000	....	....	....	....	....	....	....	3,000
Rainbow, So. Dak.	....	....	....	1,250	....	....	438	425	....	5,113
Ropes, Mich.	....	....	....	....	20,000	....	....	....	....	20,000
St. Mary's Copper, Mich.	....	....	....	....	2,000	....	2,000	....	....	4,000
Sampson, Utah	....	....	....	....	....	....	....	....	....	288,257
San Francisco, Cal.	....	....	....	....	....	....	....	....	....	22,000
Savage, Nev.	112,000	....	112,000	122,000	112,000	100,800	67,200	67,200	....	1,029,000
Scorpion, Nev.	120,000	90,000	....	5,000	....	5,000	....	....	....	415,000
Seg. Belcher & Mides, Nev	50,000	80,000	50,000	25,000	35,000	20,000	20,000	10,000	....	340,000
Seg. Iron Hill, Nev.	....	....	....	....	....	....	....	....	....	8,750
Sevier, Utah	....	....	....	....	....	....	....	....	....	....
Sierra Nevada, Nev.	100,000	71,910	80,000	55,000	45,000	50,000	50,000	50,000	....	4,555,910
Silver Hill, Nev.	43,200	43,200	30,000	16,200	5,400	5,400	....	....	....	1,992,600
Silver King, Ariz.	....	30,000	60,000	25,000	....	100,000	....	75,000	....	340,000
Siskiyou Cons., Cal.	....	....	8,000	7,000	9,000	14,000	4,000	2,000	....	44,000
Standard Cons., Cal.	....	50,000	....	....	....	....	....	....	....	99,887
Summit, Cal.	2,500	....	....	....	....	....	....	....	....	120,000
Taylor Plumas, Cal.	....	....	10,000	....	....	....	....	....	....	20,000
Telegraph, Cal.	....	....	....	975	....	....	....	....	....	3,575
Teresa, Mex.	....	....	....	20,000	60,000	....	15,000	....	....	155,000
Tetro, Utah	....	....	....	....	....	....	....	3,000	....	9,000
Tioga Cons., Cal.	....	....	....	....	....	....	....	....	....	295,000
Triumph, Idaho	....	....	....	....	....	....	....	....	....	20,000
Trojan, Nev.	10,000	....	....	....	....	....	....	....	....	370,000
Tuscarora, Nev.	10,000	....	....	....	....	....	....	....	....	15,000
Union, Utah	....	....	....	....	....	....	....	....	....	7,000
Union Cons., Nev.	75,000	50,000	80,000	50,000	45,000	35,000	20,000	40,000	....	2,545,000
Utah Cons., Utah	....	....	....	....	25,000	5,000	5,000	10,000	....	445,000
Utah State, Utah	....	....	....	....	....	....	....	....	....	....
Valenzuela, Mex.	....	....	....	....	....	....	....	2,000	....	6,000
Victory, So. Dak.	....	....	....	....	....	....	....	....	375	2,625
Wall Street, Mont.	....	....	....	900	....	....	....	....	....	1,500
Waterloo, Cal.	....	....	....	....	30,000	....	....	....	....	30,000
Weldon, Ariz.	10,000	10,000	10,000	5,000	10,000	....	....	....	....	65,000
West Cable, Utah	....	....	....	....	....	....	....	....	....	....
Wolverine, Mich.	....	....	....	....	....	....	....	60,000	....	60,000
Wood River, Idaho	....	....	3,000	....	....	....	....	....	....	3,000
W. Y. O. D., Cal.	....	....	22,500	....	....	....	....	....	....	22,500
Yellow Jacket, Nev.	60,000	....	....	156,000	90,000	90,000	90,000	90,000	6,144,000